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Investigating the Psychology of Morbid Curiosity: The Role of Needing to Know

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Abstract

The goal of this study was to investigate the psychological factors that motivate morbidly curious behavior, specifically the cognitive motivation to learn new information. Participants were shown various morbid and non-morbid control images, sometimes with a preview and sometimes without a preview. The preview condition created a situation in which the target image contained no new information, thereby removing the opportunity to learn more information. For each image, participants were asked to complete a visual search task unrelated to the content of the image as quickly as possible. If morbid content distracted participants from the visual search task, then response times for correct responses should be slower, and gaze duration on the morbid content should be longer compared to the control. Furthermore, if morbid curiosity depends in part on the opportunity to obtain new information about a potentially dangerous situation, then providing a preview of the morbid content should reduce this effect. Results indicated response times and image gaze durations were longer for morbid images and for images without a preview. These data illustrate that morbidly curious behavior significantly decreased when a preview was given and cognitive motivation was taken away, which suggests that the opportunity to learn new information is important in eliciting morbid curiosity. However, some morbid curiosity remained even in the absence of this cognitive motivation, which suggests that other factors are also at play in motivating morbidly curious behavior.

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Investigating the Psychology of Morbid Curiosity: The Role of Needing to Know

Morbid curiosity has been a phenomenon throughout human history. From public executions and medieval torture to rubbernecking traffic accidents and the existence of disaster tourism, people have long been fascinated by violent, grotesque, taboo, and downright creepy subjects. At first glance, morbid curiosity seems inconsistent with the widely accepted mood management theory that posits that individuals are motivated to alleviate and terminate negative affective states and to preserve and intensify positive affect (Zillman 1988). If that were the case, it does not make sense that people would be drawn to content that would evoke negative emotions. However, since Zuckerman and Litle's (1986) foundational study, morbid curiosity has been shown to be a common phenomenon, as has been made evident by the popularity of true crime, the horror genre, and sensationalized negative news. Despite its apparent ubiquity, morbid curiosity seems to be a paradoxical human behavior that is not well understood and has sparked the interest of psychologists to investigate the psychological mechanisms underlying the phenomenon.

Curiosity and Aversive Content

To understand morbid curiosity and morbidly curious behavior (MCB), it is important to first understand the construct of curiosity itself and how curiosity for aversive content is thought to be unique (Niehoff & Oosterwijk 2020).

Curiosity is defined as the intrinsic motivation to learn, or as a desire to understand what motivates exploratory behavior directed toward acquiring new information (Baranes et al., 2015; Oosterwijk, 2017). Theorists propose that the main motivator for curiosity is an information gap, or a discrepancy between what one already knows and what wants to know (Baranes et al., 2015). Of course, one cannot seek to learn more about something that one is not aware of, so

curiosity should peak when one has enough knowledge about a topic to appreciate that there is more to learn and should diminish when the apparent knowledge discrepancy is reduced by the availability of sufficient or too little related information. This has been illustrated in studies such as Baranes et al. (2015) in which curiosity varied in an inverted u-shaped function of confidence, where participants who were somewhat confident in their knowledge of the topic at hand displayed the most curiosity but participants who were overly confident or not at all confident in their knowledge demonstrated lower curiosity. In other words, curiosity peaked at intermediate levels of knowledge, but became lower for the lowest and highest levels.

It is generally accepted that morbid curiosity is a specific type of curiosity, with similar underlying mechanisms and functionality, but with a few key distinctions such as a focus on aversive content (Niehoff & Oosterwijk, 2020). Curiosity triggers the reward centers of the brain, offering both intrinsic and extrinsic rewards of personal satisfaction and social capital in the form of knowledge acquisition (Niehoff & Oosterwijk, 2020; Baranes et al., 2015). Studies using neuroimaging have also revealed that curiosity for aversive content triggers the same regions of the brain associated with typical curiosity (Niehoff & Oosterwijk, 2020). This suggests that acquiring knowledge is valuable even when it is knowledge concerning negative aspects of the social world (Niehoff & Oosterwijk, 2020, p 57). However, typical curiosity is often associated with positive affect, whereas morbid curiosity creates a distinct mental state in which one desires information but anticipates not liking that information (Niehoff & Oosterwijk, 2020). This leads to one of the key distinctions related to different types of curiosity, the difference between liking and wanting; one can wish to view a stimulus while not necessarily enjoying what they see.

Another important distinction is between curiosity and attention, illustrated by the difference between seeking out information and being confronted with it. Although they are

related concepts, curiosity directs attention in a strategic sense, guiding an individual to pay more or less attention to specific information (Baranes et al., 2015). It is important to consider this behavioral element in studying morbid curiosity specifically, as people are often active agents in choosing to engage with aversive content (Oosterwijk, 2017). The present study examines the implicit and explicit behavioral and cognitive processes at work when an individual engages with a morbid stimulus.

In most studies focusing on curiosity, stimuli primarily have had a positive or neutral valence. By contrast, some recent studies have specifically investigated curiosity for aversive stimuli, focusing on the behavioral aspects of curiosity. For example, participants in Oosterwijk (2017) were given a choice paradigm in which they were briefly shown two images and were then asked which image they would like to investigate further. These images were categorized as having a positive, neutral, or negative valence. For the negative images, stimuli were broken down into three categories: social (situations of violence involving human actors), physical (mutilations or gore), and natural (attacking animals or insects). Results indicated that participants most often chose to view negative stimuli over positive or neutral stimuli and preferred the negative social category over negative images in the other categories. Oosterwijk (2017) took efforts to mitigate potential interfering factors by measuring the images through ratings on interest, negativity, intensity, and complexity, all factors which indicated no significant relationships with the results. The focus on social contexts is not surprising as humans have been shown to be more motivated to explore content that could provide information about how to navigate various social situations, thereby acquiring an element of self-relevant knowledge (Scrivner et al., 2019; Oosterwijk, 2017). Because people are more driven to attend to

human subjects compared to other stimuli, it appears as though people are driven to engage in MCB more when it specifically involves human actors (Scrivner et al., 2019).

Theories of Motivations for MCB

Since Zuckerman and Litle's (1986) landmark study, psychologists have begun investigating the factors that motivate MCB. Zuckerman and Litle (1986) illustrated how MCB is positively correlated to the personality traits of sensation-seeking and extraversion. They also demonstrated that MCB activates the catecholamine systems in the brain, the same reward systems that are activated when individuals are highly aroused; they proposed this as a potential biological explanation for the phenomenon (Zuckerman & Litle, 1986). These researchers, along with other theorists, suggest that morbid curiosity could also be explained as an evolutionary development. When early humans learned more about potential threats in their environment, they were better prepared to handle them, leading to the development of morbid curiosity as a type of adaptive protective vigilance and threat negotiation system (Harrison, 2022; Scrivner et al., 2021). Although these biological and evolutionary perspectives on motivation provide insight into the possible origins of MCB, recent theorists have begun exploring other cognitive and emotional / social motivating factors, highlighting their potential importance in understanding how morbid curiosity functions.

Cognitive Factors

New Information.

As curiosity is thought to be motivated by an information gap, cognitive factors appear to be important components that stimulate curious behavior. The desire to acquire new information that occurs because of this information gap makes curiosity a key aspect of active learning (Baranes et al., 2015). This motivation to learn is particularly interesting in the context of morbid

curiosity, as negative content may provide unique informational value. Curiosity for the negative experiences of others allows one to prepare for negative events more safely by acquiring information about such situations without needing to experience them, and their associated unpleasantness, personally. Of course, the availability of potentially useful negative information may not always be judged as worth a glance: some may actively choose not to know because they believe they will be unable to cope with the acquired knowledge (Niehoff & Oosterwijk, 2020).

Complexity Reduction, Cognitive Closure, Need for Cognition.

This motivation to gain information is closely related to the goal of complexity reduction. When a stimulus is too complicated to immediately apprehend, one must investigate and learn about the stimuli in order to reduce this complexity and reach a fuller understanding (Chiu & Soo, 2010). Complexity reduction is therefore another potential cognitive factor that motivates behavior related to curiosity. People may also be motivated to engage with aversive content to resolve the uncertainty it evokes, illustrating the individual difference of the need for cognitive closure (Niehoff & Oosterwijk, 2020). Therefore, individuals with different levels of need for certainty are likely to investigate content with different levels of interest, aiming to satisfy this desire for closure. A related cognitive factor is the need for cognition (Cacioppo et al., 1996). People differ in their desire to engage with information that is novel, unusual, complex, or challenging. Because negative content is typically deviant from the norm, it may be that this motivation to engage in cognitive challenges results in MCB (Niehoff & Oosterwijk, 2020). Aversive content might also prompt people to engage in effortful meaning-making, seeking out cognitive challenges in a search for personal development (Scrivner et al., 2022).

Interconnected Cognitive Motivations.

Although these cognitive factors can function independently, they are often intertwined. For example, someone could enjoy logic puzzles because a) they want the answer to the problem and desire more information, b) they want to reduce its complexity by solving it, c) they dislike the uncertainty of not knowing the answer, and/or d) because they have a high need for cognition and enjoy the challenge. Each of these factors would be interesting to analyze independently in their relation to MCB. However, due to the time constraints of this project I was advised to focus primarily on the cognitive motivation of the opportunity to learn new information.

Emotional Factors

Arousal.

Morbid curiosity is likely driven by not only biological and cognitive factors, but also by emotional and social motivators. The most obvious emotional motivator of MCB is the state of arousal and enjoyment morbid content can induce (Zuckerman & Little, 1986). Although it is an individual difference, the trait of sensation-seeking is positively correlated with trait morbid curiosity; some individuals enjoy the thrill of a scary or threatening situation (Zuckerman & Little, 1986; Scrivner et al., 2022). This can be seen in avid horror-movie fans and "adrenaline junkies" who regularly engage with morbid content because of the states of arousal and excitement this content evokes, resulting in general enjoyment of certain aversive content (Hoffner, 2009; Harrison & Frederick, 2022).

Empathy.

Another emotional factor that could motivate MCB is the desire to experience an empathetic response. When an individual views aversive content, particularly content that is set in a social context, they are likely driven to have an emotional connection and response to the

victim of the situation (Hoffner, 2009). This empathetic response depends on the situation at hand, thereby driving individuals to learn more about the morbid content to determine what emotional response and connection to engage with. Although this process may not be intentional, people are likely motivated to engage in MCB for this emotional reaction (Niehoff & Oosterwijk, 2020). Engaging with morbid content that involves social scenes is thought to provide an opportunity to practice empathy and learn about social interactions, increasing an individual's skills in understanding and predicting other people's internal states (Niehoff & Oosterwijk, 2020). However, because empathy can be costly in terms of mental resources, high levels of empathy could also drive people to intentionally avoid aversive content.

Emotional Regulation Practice.

An additional emotional motivator of MCB is a desire to engage with difficult emotions through morbid content, a strategy that has been suggested as an avenue for therapeutic practice (Scrivner & Christensen, 2021; Scrivener & Clasen, 2021). Exploration of negative content can provide a safe way to engage with emotions that are difficult, such as fear, anger, and sadness, and allow an individual to practice emotional regulation (Niehoff & Oosterwijk, 2020). For example, data collected from haunted house visitors suggested that people decide to engage with fear-inducing experiences because it provides personal challenges and can thereby train distress tolerance (Niehoff & Oosterwijk, 2020). In another example, researchers argued that regular engagement with scary fiction could be an avenue through which people can build and strengthen their emotional regulation skills as well as their psychological resilience (Scrivner & Christensen, 2021; Scrivener & Clasen, 2021). Therefore, engaging with aversive content can provide an opportunity to practice these important skills, offering motivation for MCB.

Moral Obligation.

A final emotional and social motivator for engaging with morbid content is that of moral responsibility. Individuals may experience a sense of moral obligation to witness the suffering of another, choosing to approach negative information because the emotions that are elicited are in line with their goal to follow social and moral norms (Niehoff & Oosterwijk, 2020).

Interdependent Motivations.

Like cognitive motivations, these various emotional and social motivators of MCB could work separately but likely work in an interdependent manner, both with each other and with cognitive and biological motivators. For example, the hypothetical evolutionary adaptation of MCB as protective vigilance and threat negotiation could be conceptually related to the cognitive need to learn more information and reduce complexity. Additionally, the need for cognition could also be related to emotional / social motivators such as an opportunity to practice difficult emotions, as both motivate an individual to engage with aversive content for the challenge and learning potential. These motivating factors are likely interdependent, but this study aims to focus on manipulating cognitive factors to examine their specific role in motivating MCB.

The Present Study

The aim of the present study was to examine how cognitive factors influence morbid curiosity. In this experiment, cognitive motivators were manipulated so we could examine their specific role in eliciting MCB. I focused on the desire to acquire new information as the primary cognitive motivating factor, examining MCB in the absence of the opportunity to gain new knowledge. MCB may still occur in this absence, suggesting the importance of other motivators (alternatives hypothesis). However, it is possible that MCB is less compelling in the absence of cognitive factors and relies primarily on this type of motivation, suggesting that other motivators

that lead to morbid curiosity are only at work if cognitive motivators are also present (cognitive hypothesis).

Methods

Participants

Participants were all undergraduate students at Macalester College. Of the 22 participants, 16 were female and six were male, ages 18-21. They each completed the experiment for partial course credit.

Design

This experiment utilized a 2 (Image content: morbid vs. non-morbid) x 2 (Preview: with preview vs. without preview) within-subjects design, resulting in four experimental conditions. This allowed me to examine if the behavioral response produced main effects for image content, for preview, and for their interaction.

Visual Search Task (VST)

As a part of each trial, participants were given an orienting task. This gave the participants a goal to focus on, allowing me to examine how much the morbid content in various images distracted participants from completing the task. Response times to this task could indicate how much morbid curiosity competed with the task. This visual search task (VST) involved asking participants to indicate as quickly as possible if there were one or two roses photoshopped into each image. I expected that greater morbid curiosity would be associated with slower responses to this visual search task.

Materials

Eye Tracker

An EyeLink 1000 eye tracker manufactured by SR Research Ltd. (Ottawa, Ontario, Canada) was used to track and record eye movements, processed with SR Research Data Viewer. This setup included two PC computers, the host and the display computers. The host PC was a specialized unit that was a part of the EyeLink 1000 system and was operated only by the experimenter, running the MS DOS operating system with a standard keyboard, mouse, and 15" LCD monitor. The display PC was an ordinary computer running Windows 10 and was largely operated by the participant. It was used with a 21" BENQ LCD monitor, with a 1920 x 1080 screen resolution, a 60 hz refresh rate, and a standard keyboard and mouse. SR Research Experiment Builder was used to program the experiment and present the stimuli.

Trait Morbid Curiosity

The individual difference trait of morbid curiosity was measured using Scrivner's "Morbid Curiosity Scale" (Scrivner 2021). This 24 item scale (Appendix A) was measured using a Likert scale in which participants rated various statements from 1 (strongly disagree) to 6 (strongly agree). The scale is composed of four subcategories: minds of dangerous people, body violations, interpersonal violence, and supernatural danger. An example item from the survey is "I am curious about crime and enjoy reading detailed news accounts about murders and other violent crimes." This survey was previously validated and tested for reliability successfully (Scrivner 2021). Participants took this survey on a computer using google forms.

Stimuli

Target stimuli consisted of 12 pairs of morbid and non-morbid images, making a total of 24 target pictures (Appendix B). These were all found using a google search engine. The morbid

images were based on subjects that were common targets of morbid curiosity, and the control images were paired with each morbid image based on visual similarities. For example, a morbid image of a plane crash was paired with a control image of people loading into a plane. Another pair consisted of an athlete with a broken leg as the morbid image and a control image of an athlete stretching their legs. These pairs of images allowed me to compare responses to control and morbid stimuli and examine if there was an interaction between image type (morbid vs control) and preview condition (preview vs no preview). The images chosen were each focused on human actors, as people are most interested in social scenes, particularly in terms of morbid content (Oosterwijk 2017). None of the morbid scenes included children. Although many of the morbid images showed people that were injured, none included explicit dead bodies.

In addition to the 12 pairs of morbid images and control images, 24 filler images were included. These images displayed ordinary scenes without any morbid content and were added to help obscure the purpose of the study by reducing the total number of morbid images.

Out of the 48 images, each participant was shown 24 images with a preview and 24 images without a preview. Additionally, of the 48 images, 24 were shown with two roses and 24 were shown with one rose for the VST, ensuring that this factor was balanced throughout each subset of materials. Two stimulus lists were created to counterbalance the trials and materials, and the 48 trials in each list were randomized for each participant. These lists also ensured that participants were not shown the same image in both the preview and no preview condition, but that each list presented the images with different preview conditions. For example, if a participant was given list one they could see a picture of a broken leg without a preview but would not see it again with a preview. The opposite would then be true for a participant given list two.

Instructions

At the beginning of the experiment, participants were instructed that they would see a series of photographs, each of which would have either one rose or two roses superimposed on the image in various locations. Their task was to indicate as quickly as possible if there were one or two roses by pressing the '1' or '2' key. They were asked to press the spacebar to move on to the next trial. A second instruction screen explained the preview procedure, detailing that half of the trials would begin with a preview of the image for three seconds before the target images with the orienting task (rose visual search) was presented. These preview images were framed by a gray border, indicating they were preview images and did not include the rose task.

Procedure

Each participant was run individually in a research lab using the eye tracking system described above. Participants were set up with the eye tracker and had their eyes calibrated and validated using the Eyelink 1000.

Participants first completed five practice trials, two of which were in the preview condition. These images each matched the criteria of the filler images. Participants then moved on to the 48 main trials. Each trial proceeded as follows: a fixation cross appeared for 2000 ms. For no preview trials, the fixation cross was immediately followed by one of the images with the rose(s) included (filler; morbid image; or control image). The participants then completed the VST by determining if there were one or two roses in each image as quickly and accurately as possible. After making a response, participants were asked to press the spacebar to move on to the next trial. The latter response was included to provide an opportunity for curiosity to be expressed after the time-sensitive task had been completed. In with-preview trials, the preview

image appeared with a gray border and was displayed for 3000 ms. Participants were then shown a fixation cross and the trial continued in the same manner as explained above.

After all the trails were finished, participants were given a survey to measure trait morbid curiosity. This was also completed on the computer but through google forms. Once this was finished, the participants had completed the experiment. It took approximately 10-15 minutes to complete the experiment.

Results

Four response time measures were analyzed: 1) total reaction time (TRT); 2) visual search completion time (VSRT); 3) post visual search response time (PVSRT); and 4) image gaze-duration (IGD). Response time (RT) data are often contaminated by statistical outliers, typically defined as data points more than 3 standard deviations (SD) from a participant's mean RT. Such outlying scores, often slower than average, are thought to be due to factors not under study and are therefore trimmed from the dataset. In the current research, however, I expected that some morbid content might prompt slower responses that likely reflected processes relevant to the research question. Therefore, I used the more conservative threshold of 5 SDs from the participant's mean as the cutoff. Definitions and analyses of these 5 measures are presented in turn. In addition, Trait Morbid Curiosity Scores were also compared with these behavioral measures to determine if there were any correlations.

Total Response Time (TRT)

Total response time (TRT) was defined as the time taken to complete a trial, beginning with the presentation of the image for the visual search task (VST), and ending with a spacebar press to move on to the next trial; preview image time was not included in this measure. Figure 1 depicts the TRT means in all 4 conditions: morbid with preview *(M=1127.04, SD=334.63)*, control with

preview *(M=1072.35, SD=392.83)*, morbid without preview *(M=1204.56, SD=441.64)*, and control without preview *(1118.37, SD=390.06)*. This pattern of results indicates that response times were on average descriptively faster for preview trials and control images. A two-way repeated-measures ANOVA revealed a significant main effect of image type, *F(1, 21)=10.19, MSE=10,712.18, p=.004*, indicating that, overall, TRTs for morbid images were significantly longer than TRTs for control images. There was also a significant main effect of preview condition, *F(1, 21)=9.20, MSE=9121.98, p=.006*, indicating that TRTs for trials without a preview were significantly longer than those with a preview. No interaction effect was found *(F<1.0).*

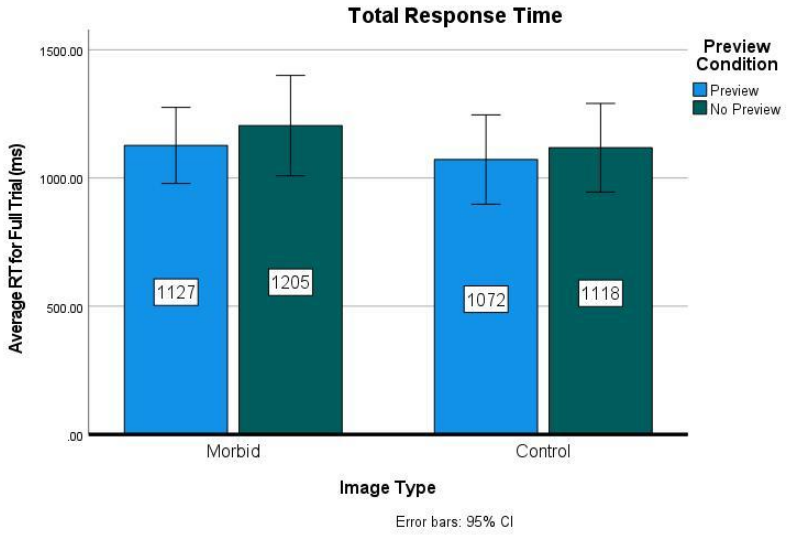

Figure 1: Full Trial Response Times

Visual Search Response Time (VSRT)

The visual search response time (VSRT) was defined as the amount of time it took to complete the visual search task (VST), starting from when the image was first presented and ending when the participant pressed the '1' or '2' key. Figure 2 depicts the VSRT across all 4 conditions: morbid with preview *(M=751.48, SD=163.59)*, control with preview *(M=699.51, SD=169.97)*, morbid without preview *(M=808.37, SD=247.71)*, and control without preview *(M=760.38, 212.48)*. These means create a pattern similar to TRT results in that on average they were descriptively faster for preview trials and control images. A repeated-measures factorial ANOVA

indicated a significantly main effect for both image type, *F(1, 21)=10.79, MSE=4,582.70, p=.004,* and preview condition, *F(1, 21)=7.99, MSE=9,703.36, p=.010*. VSRTs were significantly longer for morbid images than control images and for images with no preview in comparison to images with a preview. There was no interaction effect *(F<1.0).*

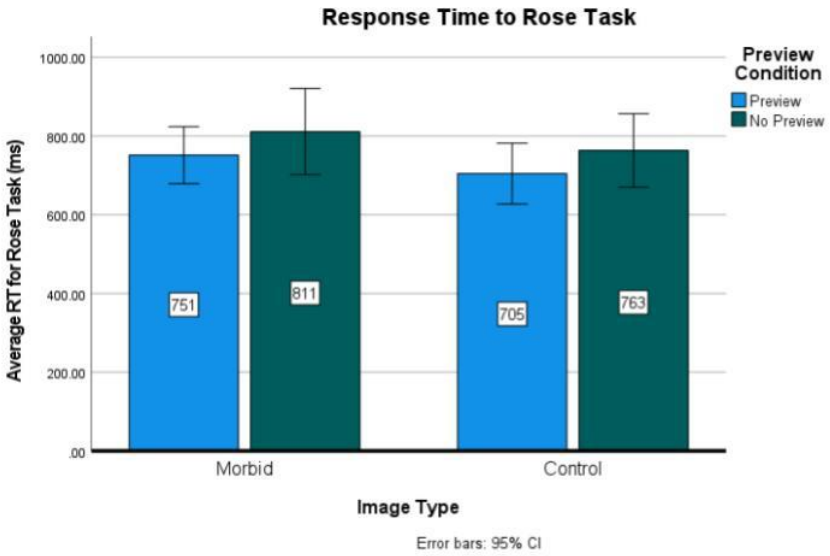

Figure 2: Response Time to Visual Search Task

Post Visual Search Response Time (PVSRT)

The post visual search response time (PVSRT) was defined as the time taken to move on from a trial after completing the VST, starting when a participant pressed the '1' or '2' key and ending when they pressed the spacebar. This measure was included to capture any possible morbid curiosity behavior (MCB) after the VST. For example, once participants had completed the VST, I thought they might return to reexamine the morbid content before moving on to the next trial. However, the results indicated no significant effects or differences across conditions. Therefore, this measure will not be discussed further (all ps > .203).

Image Gaze Duration (IGD)

Image gaze duration (IGD) was defined as the amount of time a participant's gaze was focused on the target of an image (image target), such as the broken leg in the image of an injured athlete. For each image, a shape was drawn around the image target and gaze within this shape was

measured by the eye tracker (examples shown in Appendix C.) Area was controlled for in this measure: the amount of time in milliseconds that one's gaze was focused on the image target was divided by the area of the shape in pixels. These numbers were then multiplied by 100,000 to produce realistic numbers for analysis. The data indicated that the IGD was significantly longer for the morbid stimuli than all control stimuli, and for images without a preview over images with a preview. Figure 3 illustrates this area-controlled IGD across all 4 conditions: morbid with preview *(M=503.25, SD=294.28)*, control with preview *(M=288.17, SD=156.87)*, morbid without preview *(M=606.83, SD=256.42)*, and control without preview *(M=370.10, SD=176.63)*. A repeated-measures factorial ANOVA revealed a main effect of preview condition where no preview conditions had significantly longer IGD than preview conditions, *F(1, 21)=15.51, MSE=12,203.68, p<.001,* and a main effect of image type where IGD for morbid images was significantly more than control images, *F(1, 21)=38.46, MSE=29,195.97, p<.001*. There was no interaction effect (*F<1).*

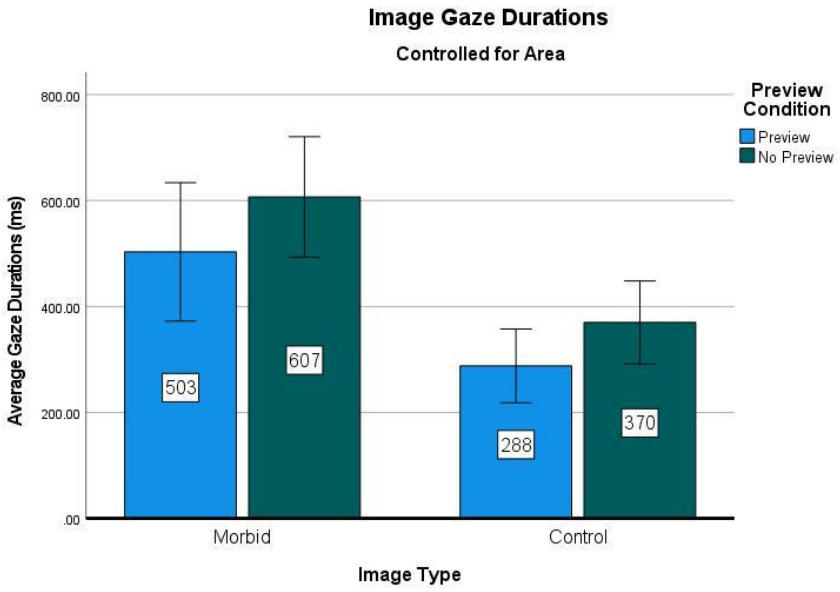

Figure 3: Image Gaze Durations

Trait Morbid Curiosity (TMC)

The 24 items on Scrivner's Morbid Curiosity Scale (Scrivner, 2020) were averaged to create a morbid curiosity score from 0-5 for each participant. Figure 4 illustrates the distribution of these

scores. Table 1 illustrates the correlations of TMC with the various behavioral measures. There were no meaningful trends between trait morbid curiosity (TMC) and any of the behavioral measures (all rs < .336; all ps > .137). Though this is a null result, it implies that whatever is driving the behavioral responses is not related to TMC.

Figure 4: Histogram of Trait Morbid Curiosity Scores

Summary

Overall, the behavioral measures indicate that the presence of morbid content in the images a) increased gaze duration on the image, compared to the control, thereby slowing responses to the visual search task; and b) was less distracting when a preview of the images was provided. These results provide evidence for both the cognitive and alternatives hypotheses. The cognitive hypothesis was supported by the significant decrease in MCB when a preview was provided. The alternatives hypothesis is supported by the persistence of MCB even when the preview preempted the opportunity to obtain new information. Finally, none of the results were related to a measure of trait morbid curiosity.

Trait Morbid Curiosity Score Correlations			
Data Type	**Condition**	**Pearson r(21)**	**Significance**
Total Response Time	Morbid with Preview	.191	.406
	Control with Preview	.021	.928
	Morbid without Preview	.094	.684
	Control Without Preview	.067	.772
Visual Search Response Time	Morbid with Preview	.227	.322
	Control with Preview	.093	.688
	Morbid without Preview	.017	.943
	Control Without Preview	.027	.907
Image Gaze Duration	Morbid with Preview	.062	.788
	Control with Preview	.024	.919
	Morbid without Preview	.009	.970
	Control Without Preview	.336	.137
Rose Gaze Duration	Morbid with Preview	.262	.252
	Control with Preview	.260	.255
	Morbid without Preview	.265	.246
	Control Without Preview	.316	.162

Table 1: Trait Morbid Curiosity Score Correlations

Discussion

This study was designed to investigate the underlying psychological processes that animate morbidly curious behavior (MCB), with a specific focus on the role of cognitive factors to produce behavioral changes. The cognitive hypothesis stipulates that morbid curiosity relies primarily on the presence of cognitive motivating factors, such as the availability of information about negative outcomes (Scrivner & Clasen, 2021; Niehoff & Oosterwijk, 2017). Conversely, the alternatives hypothesis states that morbid curiosity will persist in the absence of cognitive motivation, which suggests that other factors are also important in eliciting MCB.

This experiment used a 2x2 within-subjects design to compare participant responses to morbid and non-morbid control images, while also manipulating the availability of novel morbid information by providing a preview in some trials. Gaze duration on the images (IGD) provide the most direct measure of attention drawn to morbid content, although other factors such as response time to the visual search task provide parallel evidence. However, one must be careful not to over-interpret the number of converging response-time (RT) measures in the present experiment because they likely are not statistically independent; longer gaze time on the picture necessarily lengthens response time to the search task. For this reason, we will focus on IGD as the primary dependent variable. IGD data showed that participants allowed morbid content to interfere with completing the visual search task, which indicates the presence of MCB as responses to morbid images overall exceeded responses to control images, regardless of preview condition. However, this interference effect was reduced when participants were given a preview of the morbid image, thereby removing the opportunity to learn new information. This indicates that cognitive motivation is likely important in eliciting MCB. Although MCB did significantly

decrease when a preview was given, some curiosity remained, which suggests that some other factors were at play in motivating MCB.

These findings advance our understanding of some of the underlying psychology of morbid curiosity. At a basic level, this study helps to illustrate that novelty is important in eliciting interest in a person-based (i.e., social) morbid context, but that other factors are likely at play in motivating MCB. The present study, however, leaves many questions unaddressed, and might best be viewed as an empirical proof-of-concept that paves the way for future research. For example, I manipulated novelty in a relatively crude, categorical fashion (preview vs. no-preview) in the present experiment. Future research could manipulate the quantity and quality of novelty by varying the granularity of the preview image (black and white vs. color; sharp focus vs. soft focus; outline sketch vs. full depiction), or by providing preview information in a different modality, such as a textual or auditory description. This could help researchers to investigate the hypothetical sweet spot in the information gap where curiosity peaks, and potentially lead to the creation of a scale tracking cognitive motivation and morbid curiosity to account for specific levels of prior information that weaken or stimulate interest in aversive content. Researchers could also investigate other cognitive factors that might play a role in eliciting MCB, such as the need for cognition and need for cognitive closure discussed previously. Another influencing cognitive factor could be cognitive load: processing morbid content might take more time and effort than other content, influencing the longer IGD and response time results. In terms of specific content, prior research (Oosterwijk, 2017) has identified social content (scenes involving people) as more compellingly morbid compared to natural or physical scenes (e.g., earthquakes or a dismembered limb, respectively). For that reason, I used morbid images that fall in the social category to strengthen MCB. Future research

could investigate possible effects of natural and physical scenes, along with their potential interactions with other variables such as novelty. Furthermore, the intensity of morbid content has been suggested to play a role in stimulating MCB (Scrivner et al., 2022). For the present study, I selected the most intensely morbid content that would be permittable by the IRB. Morbid intensity, therefore, is another factor that future research could explore. Finally, it would be interesting to investigate how social norms and taboo interact with interest in aversive content, as this forbidden-fruit idea could be influencing what kind of content elicits morbid curiosity. Examining this as another potential motivational category for morbid curiosity could be useful in further developing and deepening our understanding of the phenomena.

Emotional factors related to MCB, such as empathic concern and the opportunity to practice empathy (Niehoff & Oosterwijk, 2017) were not directly examined in the present study. Since empathy is more easily triggered by scenes involving people, I selected social images which also increased the potential for empathic responses by participants in the experiment. Indeed, one might worry that the inclusion of empathy-prompting images could compromise the conclusion that the MCB effects were largely due to cognitive, drive-for-information, factors. Note, however, that motivations to express or practice empathy would not be compromised by providing a preview of the scene; arguably a preview of empathy-worthy content might actually stimulate a stronger empathic response. These data show that previews somewhat undermined MCB in our participants, but because some MCB was still left over even when cognitive motivation as removed, it is possible that these types of emotional motivating factors were at play in influencing the presence of morbid curiosity.

One unexpected result was the lack of correlation between the trait morbid curiosity (TMC) scores and MCB as measured by gaze duration and response time to the visual search

task. In comparing correlations between TMC and behavioral measures, even the strongest correlation was relatively weak, and none even approached statistical significance. It is difficult to know what to make of this lack of correlation, as I expected higher TMC to be associated with higher MCB. However, one possibility is that the morbid content in the images was so visually compelling that even without a high TMC, participants were driven to investigate and display MCB. If the morbid content displayed was subtler, or had more variation in severity, differences in behavior based on TMC might have been detected. This could be useful for future research to investigate. Additionally, a different TMC measurement tool could be used to provide additional data and further investigate this factor.

Although this research has provided insight into the psychology of morbid curiosity, realistic real-world applications will need to wait for further research. Eventually, our understanding of the psychology behind morbid curiosity could help develop therapeutic uses of aversive content (Scrivner & Christensen, 2021), provide helpful information for media outlets and content creators in learning how to utilize morbid curiosity to stimulate interest, and perhaps help explain the phenomenon of disaster tourism. However, more work is needed to deepen our understanding of how and why morbid curiosity works before any applications can be considered.

Conclusion

Overall, this study provided insight into the role that cognitive motivating factors play in stimulating morbid curiosity. The present study was not designed to assess how emotional / social motivators specifically could strengthen morbid curiosity: the present results only speak to the importance of novelty. However, these results also suggest the influence of other forces on morbid curiosity, making it useful to consider other motivations. This conclusion adds to the

psychological understanding of how and why morbid curiosity functions the way it does, and prompts opportunities to expand our knowledge of how morbid curiosity affects behavior in a variety of contexts. Further research into morbid curiosity holds the potential not only to expand scholarly work in this field, but also to help us understand what it is about the human condition that compels us to investigate bad news, love movies with suspense and horror, engage in rubbernecking, and otherwise seek opportunities to attend to the morbid in the world around us.

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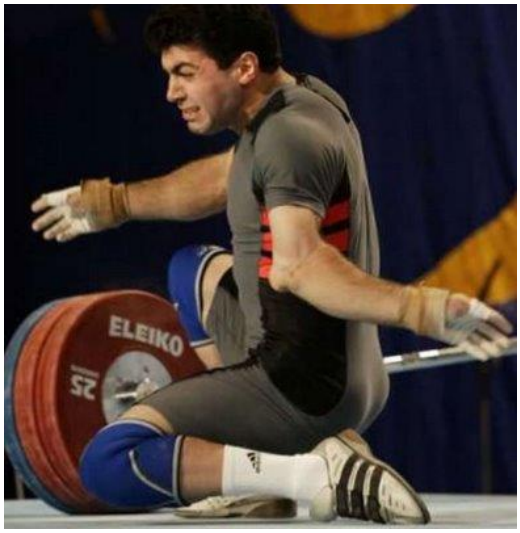
Appendix A: Scrivner's Morbid Curiosity Scale (Scrivner, 2021)

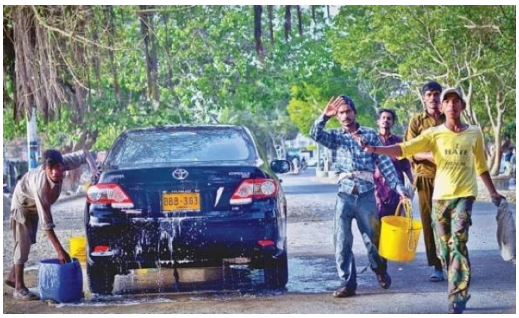
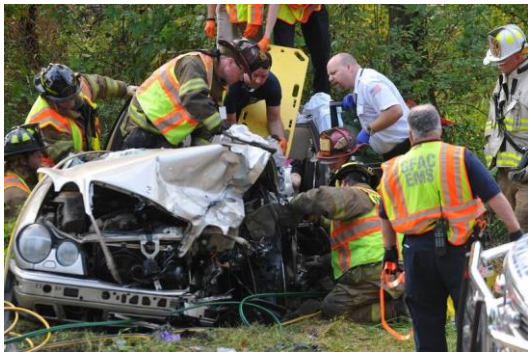
Responses are on a 6-point scale from strongly disagree to strongly agree. The letter in parentheses following each statement indicates which subscale the question belongs to and should not be included in the statements that participants see (B = Body Violation, V = Violence, M = Motives of Dangerous People, and P = Paranormal Danger). To calculate trait morbid curiosity, simply average the responses.

Instructions:
Please report how much you agree or disagree with the following statements. There are no right or wrong answers, just answer honestly and with your gut reaction.

1. If I lived in Medieval Europe, I would be interested in attending a public execution. (V)
2. If a head transplant was possible, I would want to watch the procedure. (B)
3. I am curious about crime and enjoy reading detailed news accounts about murders and other violent crimes. (M)
4. I think the supernatural is an interesting topic. (P)
5. If I lived in Ancient Rome, I would be interested in attending a gladiatorial fight. (V)
6. I would be curious to see how an autopsy is performed. (B)
7. I would be interested in watching a documentary on motives behind real murders. (M)
8. I would be interested in attending or watching a video of an exorcism. (P)
9. If I saw a street fight break out, and knew I could not intervene, I would try to watch It. (V)
10. I am interested in seeing how limb amputation works. (B)
11. My favorite part of a crime show is learning about why the killer did what he did. (M)
12. I find the Occult interesting. (P)
13. I would be curious enough to watch a duel if I lived in the Wild West. (V)
14. I would like to see how bodies are prepared for funerals. (B)
15. I would be interested in watching an interview with an imprisoned serial killer talking about his crimes. (M)
16. A documentary on Voodoo would interest me. (P)
17. I prefer violent movies and TV shows to be uncensored. (V)
18. I think the preservation of bodies, like in taxidermy or mummification, is interesting. (B)
19. Being a criminal profiler who studies the personality of murderers would be an interesting job. (M)
20. I am curious how a Ouija board works. (P)
21. I am curious what a battle looked like in the Middle Ages. (V)
22. I am curious what the deadliest toxin in the world would do to the body. (B)
23. I am curious about the minds of violent people. (M)
24. I think witchcraft would be an interesting topic to learn about. (P)

Appendix B: Target Images

Pair Number	Morbid	Control
1		
2		
3		

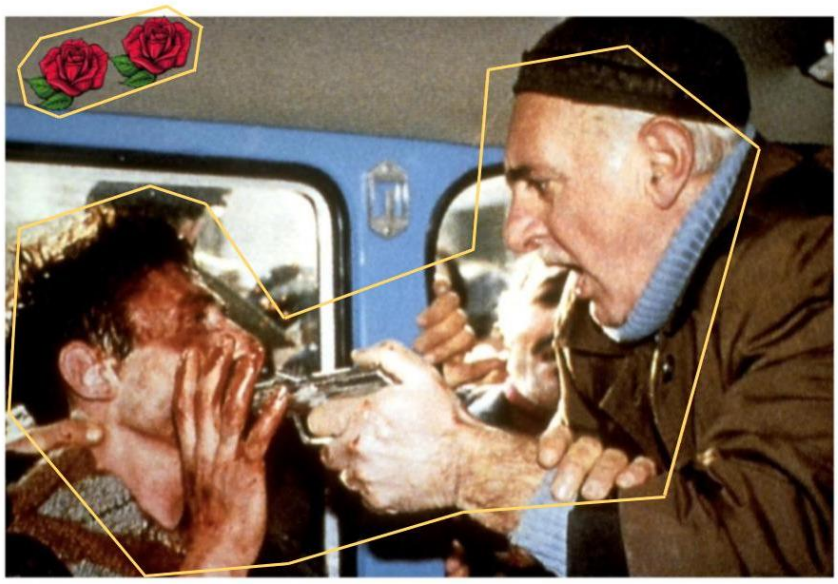
4		
5		
6		
7		

8		
9		
10		
11		

12		

Appendix C: Image Target Examples

Control Image #9 with Image Target



Morbid Image #9 with Image Target