Blog

“BOO → AAAH”: An Investigation of Where our Attention is Guided During a Jump Scare Sequence

The fearless but horror-loving lab interns found themselves with a bit of time on their hands and decided to use eye-tracking tech in the lab to investigate the use of misdirection in connection with jump scares. You'll never guess what they found!

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Figure 1

The Terrible Trio of fall 2023 lab interns (left to right): Sofie Vittrup, Sofie Thinggaard, and Peter Westergaard

Can you ever get enough horror? In the aftermath of the Halloween season, and a successful round of data-collection at Dystopia Haunted House, we three interns simply hadn’t had enough of horror, and we missed the sweet thrills of chainsaws and screams in the air. Therefore, we decided to conduct a little experiment on our own: exploring jump scares – a technique employed to create a startle response, usually reacting to a loud noise and rapidly changing images – in a selected sample of audiovisual horror media. Our methodology for the project consisted of us watching modern horror films and TV shows, Mike Flanagan’s *The Midnight Club* (2022) & *The Haunting of Hill House* (2018) and Ari Aster’s *Hereditary* (2018), while alternating between who wore eye-tracking glasses. Our initial hypothesis was that the director or showrunner would try to distract the audience by pulling our attention away from where the jump scare is going to occur (misdirect the spectator’s attention). Yet, like most things in life, things might not turn out the way you expect them to...

In an article by Clasen, Engelst, and Terkildsen (2023), they discovered that the intensity of a jump scare is correlated with the mental workload that you're under – so, for example, if you're super focused on a task in a game, you will experience the jump scare as even more startling. This may be because the brain was spending some of its cognitive capacity on the task rather than preparing for a threat, making the startle unexpected – and, in turn, an unexpected threat elicits a stronger defensive response, which we experience as a more intense jump scare.

Moreover, Clasen (2021) has also written a chapter, 'I'm Nervous about the Jump Scares', where he investigates the jump scare from an evolutionary perspective. In the chapter, Clasen states that the jump scare has a rich history as a storytelling tool, dating all the way back to our evolutionary ancestors and their oral story-telling traditions. Snap back to the present, and the jump scare is still used aplenty in modern storytelling, especially in horror films, but also in other contexts.

The tool is, for instance, also implemented in storytelling in kindergartens. All three of us (the interns) have vivid memories of kindergarten teachers immersing us into scary stories – scary in the eyes of a five year old – just to release our built-up tension and suspense with a BOO!, usually followed by screams that luckily turned to laughter almost immediately after. Whether it's an oral storyteller telling a horrific tale, a horror film, or a five year old being told a scary story, it makes sense that this tool has survived the trial of time; it is effective for the storyteller to create suspense and engage the viewer or listener. But *how* does it work?

There is no one-size-fits-all formula to this question. Although, there are some general principles often employed. Once again, we turn to Clasen's (2021) chapter for answers. Clasen mentioned that in the hit film, *Jaws* (1975), some of these principles are employed. For instance, the use of reaction shots. In short terms, this jump scare pattern follows approximately this structure: a shot of a character being wary or anxious → a shot of what causes the anxiety → a shot of a character reacting to the cause. Now, of course this pattern varies slightly from media to media, but the general structure is often present. However, this is not the only principle used in the making of a jump scare. Some horror filmmakers seek to misdirect the spectator (e.g., by making us look away from where the actual jump scare will occur).

Our hypothesis, that the director misdirects our attention before a jump scare occurs, is built on research which states that misdirection is a factor for an effective jump scare: '"A good jump scare is a magic trick. It's 'I'm going to get you to look over here while I'm doing this,' and then out of nowhere — bam! — something's going to get you"' (Cargill in Terkildsen et al. 2023, 2). The reason why misdirection works is because our cognitive resources are limited, and having to process something on the screen unrelated to the upcoming jump scare, like two characters having a heated argument, fills up these resources. We now have fewer resources left for processing threat cues, so when the jump scare occurs, it is now very

unexpected and we jump higher (Terkildsen et al. 2023, 3). We then hypothesized that the directors/showrunners would take advantage of this, making the viewer look in another direction, thus, taking away focus and ability to threat detect, with the consequence that the jump scare is now unexpected and effective. However, our little experiment showed something different.

The data we have obtained from watching a horror film and TV-shows with eye-tracking glasses shows that we have a clear preference for looking at faces – both in regular scenes and during jump scares. Particularly in Mike Flanagan's *The Midnight Club* and *The Haunting of Hill House*, a lot of the jump scares rely on reaction shots. When building up to a jump scare, we see the character's frightened face before we see what triggered it – this is effective in startling the audience because it enables emotional contagion. Emotional contagion is an adaptive mechanism which intensifies our reaction to scary stimuli because we mirror the characters' aversion to whatever horrifying monster that pops up on the screen (Clasen 2017, 35). We see not only what they see, but also their reaction to it, and this combination of visual and emotional input maximizes the effect of the jump scare. For example, in the first episode of *The Midnight Club*, the main character, Ilonka, is shown looking into a mirror, frozen, eyes widening in shock, before the camera switches to her point-of-view where she sees an old, dead-looking man staring back at her.

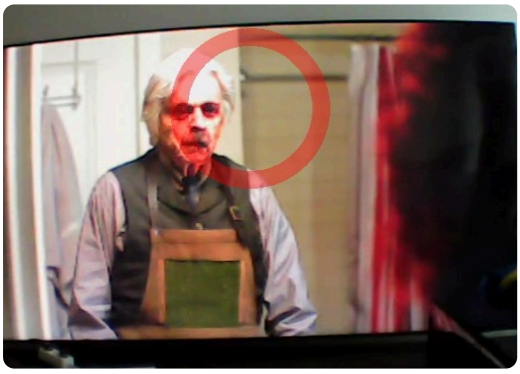


Figure 2 *Eye-tracking footage. The red circle shows where the viewer is looking.*

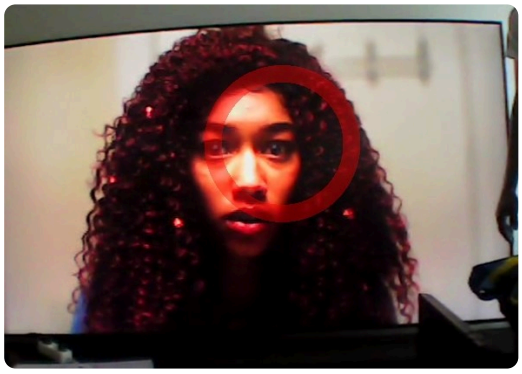


Figure 3 *Eye-tracking footage. The red circle shows where the viewer is looking.*

This focus on characters' reactions also works as a sort of jump scare primer. Jump scares will rarely come out of the blue; instead, the director will build tension and a sense of dread which will have the viewer on the edge of their seat, waiting for something to happen. By putting focus on characters' faces, the viewer will rely on them and their emotions to tell them when a threat is coming. When someone on the screen is anxious, we get anxious. This works in the jump scare's favour: 'If people are anxious, they respond to sudden stimuli with greater startle than if they are calm, because they already have anxiety juice in their mental carburetor' (Clasen 2021, 21). We can see this in the previous example from *The Midnight Club*, where Ilonka has started coughing up blood and is visibly upset. This already puts the viewer on edge, which is intensified as we see her frightened look in the mirror.

Flanagan purposely builds up tension throughout the scene and releases it with a jump scare when the man in the mirror appears, making the startle greater than if there had been no build-up. Moreover, *The Midnight Club* is not exclusive in this approach. The same principles and patterns are witnessed in numerous similar examples in *The Haunting of Hill House* and Ari Aster's *Hereditary* as well.

While a lot of the horror footage that we have reviewed makes use of reaction shots in order to build up to an effective jump scare, we did also find examples of misdirection. In one of the final scenes in *Hereditary*, we see the (now possessed) mother in the corner of the room as she is stalking her son, Peter. A lot is happening in this scene: Peter has just found his dead father on the floor, there is a naked, strange man in the doorway, and there is a noise which makes Peter turn to look at the corner where his mother was just seen, but which is now empty. From our data, we can tell that this successfully misdirects the viewer's attention; in the seconds before the jump scare, the viewer is looking around the scene at Peter and the fireplace, and thus fails to detect where the threat will actually come from - the dark corner to the left of the screen. In turn, this creates a bigger startle than if the viewer had been able to anticipate where the jump scare would appear.



Figure 4

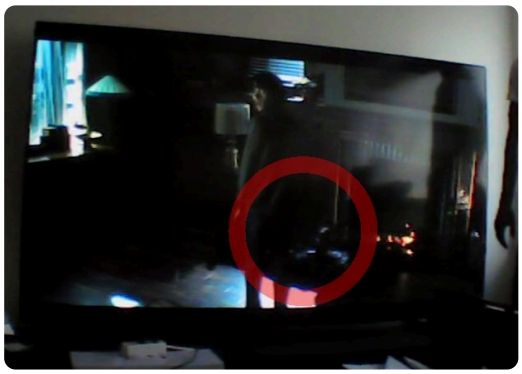


Figure 5

We can thus conclude that *The Haunting of Hill House*, *The Midnight Club*, and *Hereditary* rarely employ misdirection by making us look at the wrong place the jump scare will occur. Instead, they mostly build up dread by making us look at the characters' reactions to what will cause the jump scare, be it a monster, distorted images, or a person with ill intent.

However, we have to keep in mind that we can only make limited conclusions due to our narrow sample size, which consists of one movie and two Netflix shows (the two shows being created by the same showrunner). Likewise, it is difficult to generalize much because we only had three participants. To further explore where film and TV-show creators guide our attention during a jump scare sequence, more horror media should be included along with older titles as well. Additionally, more participants of various ages and gender should be incorporated in future studies to be able to conclude more general aspects of the jump scare sequences in audiovisual

horror media. Even with these caveats, it was a real treat for us interns to get together for some lab-based horror-fun before our internship at the Recreational Fear Lab ends.

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