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Abstract

In most religious traditions, there exists the conception that human beings can lose their freedom of will to an invading consciousness. We argue that possession myths emerge from evolved mental architecture and reflect a constellation of deep-seated beliefs about cognition, consciousness, and mind-body dualism. We also consider why possession is almost always considered frightening and aversive, thus explaining why the horror genre, and audiovisual horror in particular, has embraced the trope of possession. We analyze how possession works in two examples: *The Exorcist* (1973) and *Supernatural* (2005- ).

Finally, we conclude by briefly discussing the possibility that possession mythology represents an interesting test case for examining the origins of culture in general. Culture, as others have also suggested, exists first as an outgrowth of human psychological faculties, but can then come to exert top-down causal influence on those same faculties.

**Keywords:** possession; dualism; consciousness; evolutionary psychology; cognition; culture; horror fiction; demons; *The Exorcist; Supernatural*
The concept of possession appears to be a human universal (Brown, 1991). Belief in possession by an external agent can be traced across history and cultures. The German scholar T. K. Oesterreich, who published a massive study of possession in 1921, documented the “wide distribution of the phenomena of possession over the habitable globe” (Oesterreich, 1921, p. 376). Oesterreich pointed to descriptions of demonic possession in the biblical Gospels, and found similar beliefs in “higher civilizations” as well as among “primitive peoples.” Likewise, Goodman emphasizes the cultural prevalence and deep ancestry of “the whole complex of possession and the rituals concerning it” (Goodman, 1998, p. 25). Noll claims that among the “most ancient beliefs of humankind is that a spirit, force or alien entity … can enter a person’s body and paralyze or supplant the will or volition of that person” (qtd. in Moreland, 2014, p. 211). Whether referring to the Jinn in the near east, the Dybbuk in Jewish mysticism, or demonic possession in Christian traditions (e.g., Christ’s exorcism of the man possessed of a “legion” of unclean spirits in Mark 5) diverse human civilizations have all devised cultural systems that involve beliefs about the capacity of one consciousness to invade and seize control of another physical body.

The cultural prevalence of the concept of possession suggests either that the phenomenon is real—that disembodied, spiritual agents exist and can “enter a person’s body and paralyze or supplant the will or volition of that person,” in Noll’s words—or that universal psychological dispositions give rise to pervasive cultural traditions that are both ubiquitous and misguided. We consider the first option scientifically untenable. Thus, in this article we delineate the evolved psychological underpinnings of possession beliefs, notably intuitive dualism. We argue that human beings across cultures have, at
various times, conceived of consciousness as something that can be decoupled from physical substrate in such a way as to be preserved, and then instantiated into another physical substrate. Furthermore, we argue that possession tends to be viewed as a deeply undesirable phenomenon for reasons discussed below. This is why the concept of possession has become popular as a frightening trope in the horror genre, and in audiovisual horror specifically. Using the 1973 horror film *The Exorcist* (Friedkin, 1973) and the television show *Supernatural* (Kripke, 2005-) as points of reference, we show how possession is depicted in these media to frighten viewers through engaging evolved dispositions and intuitive psychological faculties.

*Consciousness & Dualism: Prerequisite for Possession Myth*

Scholars working across the various sub-fields of anthropology have documented the numerous practices, beliefs, traditions, and other social mores that overlap from culture to culture (see Brown, 1991). Some psychologists have interpreted this overlap as a hallmark of the shared evolutionary pressures that sculpted the neurological and psychological repertoires of human beings, both within and after we left Africa and began spreading across the globe (Pinker, 1997). Indeed, while more granular features may vary, the fact that every culture on the planet has devised mythologies related to various aspects of creation, death, and the afterlife suggests some strong uniformity in human nature as a whole (Brown, 1991; Boyer, 2001).

A topic that has been extensively discussed in this area, both in ancient civilizations and more recently, is how humans conceive of consciousness. Across cultural and historical divides, humans have bifurcated what seems to be an ethereal substance of the mind from the physical substrate of the body (Pinker, 1997; 2002). The
Western philosophical tradition has struggled mightily to defend this conception with principled arguments. One of the most famous arguments, made by Descartes, was that, whereas the physical body is divisible, the mind seemingly is not, making it a different sort of entity altogether (Pinker, 2002). Tethered to this argument, of course, were common and parochial understandings of the soul, or some type of essence that animates human experience in life and might also persist after death. Again, granular details and various myths about the soul certainly vary in interesting ways from culture to culture, yet the fact that ideas about souls exist in presumably all cultures suggests that human psychology has an evolved tendency towards dualism (i.e., a mind-body separation) (Bloom, 2004). This intuitive psychological understanding of how the mind is distinct from the body appeared in ancestral humans, setting the stage for cultural explorations of how this might work. In particular, we argue that dualistic consciousness was a necessary precursor for the invention of possession myths across cultures worldwide.

It is only more recently that medical science and neuroscience began to accumulate the requisite evidence to concretely refute notions of mind-body dualism. Arguably, the most well known medical case (both among the scientific community and the lay public) to undermine the idea of dualism involves the injuries sustained by the railroad employee Phineas Gage over a century ago. Gage, as has been well documented (see Damasio, 1994), was injured when an iron rod was propelled through his prefrontal cortex. Once the dangers of infection were sufficiently fended off, Gage recovered physiologically, yet suffered a range of personological and behavioral impairments. To simplify, his previously conscientious and agreeable tendencies were replaced with an increased propensity to engage in impulsive and overtly antisocial behaviors, providing
some of the, at the time, first clear evidence tying psychological phenomena to physical structure (i.e., the brain).

Since the documenting of Gage’s accident, there has been a flood of research across the medical, neuroscientific, neuropsychological, and cognitive disciplines that has further demonstrated that human consciousness and personality are firmly instantiated in the brain (Boutwell, 2018; Graziano & Webb, 2014; Pinker, 2002; Tononi & Koch, 2015). Moreover, as neuroimaging tests have become more advanced, researchers working directly in the area of consciousness have produced a steady stream of results illuminating the so-called “neural correlates of consciousness” (NCCs) (Tononi and Koch, 2008). While a unifying theory of consciousness remains elusive, what is clear is that the brain and conscious experience are not separate, and that brain functioning underlies conscious experience, personality, behavior, motivation, thoughts, experiences, perceptions, and every other type of “experience” that one might have, including the experience of believing something. Thus, belief in possession emerges from psychological mechanisms instantiated in the brain. Understanding these psychological mechanisms can help us understand the cultural notion of possession, including the expression of possession in contemporary horror media, and vice versa—understanding these cultural phenomena helps shed light on the underlying psychological mechanisms.

One possible avenue by which mind-body dualism might have arisen across our ancestral past is via an evolved mechanism known in the scientific literature as Theory of Mind (ToM) (Premack & Woodruff, 1978). Because humans evolved in a social niche and are dependent on other humans for collaboration and reproduction, our species evolved highly developed capacities for inferring the mental state of others through their
observable behavior. We intuitively impute to others beliefs and motives that may differ from our own beliefs and motives in order to anticipate their responses and behaviors (Baron-Cohen, Leslie, & Frith, 1985). Put differently, ToM helps us to predict what action a conspecific is likely to take in a given situation. The fact that all of the different mental states inferred through Theory of Mind are unobservable and intangible may lead us to infer that other people consist not just of physical bodies moving and acting in three-dimensional space, but of immaterial and invisible psychological processes and states that control the observable bodies.

We may even draw on our own experience for this insight: If I have slept on my arm and thereby obstructed its blood flow, I may briefly be unable to move the arm despite the fact that my failed willful attempt to perform the action is exactly equivalent to countless previous successful attempts. Conversely, my arm may suddenly come to move due to a spasm over which I have no control at all. In both cases, the arm comes to feel like an alien, uncontrollable appendage rather than a part of myself. The cases illustrate that my body’s physical movement is analytically separable from my conscious intention to cause the movement. Presumably, other people would also experience such seeming separations between the mind and matter that make them up (Bradford et al., 2015).

At this point, it is worth pausing briefly to clarify a particular point related to the origins of dualism. It is unlikely that dualistic beliefs emerged as a result of a singular cognitive trait (or suite of traits) such as ToM. We mention ToM simply as a key example that seems to have played a significant role. Our tendency to view the world in dualistic terms could have arisen in part from ToM, which then by extension helped to
underpin our belief in possession. Once germinated, such beliefs may have gained additional traction as prescientific attempts to explain radical personality change in individuals, whose personality change (whether caused by disease or injury or some other circumstance) seemed to imply possession by another (disembodied) entity. Such belief was compelling because it accounted for an otherwise inexplicable phenomenon and satisfied an intuition about a dualistic world.

Dualistic thinking, then, further suggests that a body can be inhabited by different minds, or spirits, and hence that we may coherently claim that some physical agent is not who they once were. Psychological studies have shown that such judgments of personal identity are strongly contingent on specifically moral continuity. People are most inclined to say about others that they are a different person or at least “no longer themselves” when they change morally, as opposed to undergoing some other form of mental change (Strohminger & Nichols, 2014). You are not the same person if you suddenly become unsociable and hostile, but you are the same person if you lose your ability to navigate or suffer speech impairment. The reason that morality figures so prominently in judgments of identity, for hyper-social creatures like ourselves, is likely that it is paramount for us to ascertain who is likely to be cooperative, and who is not (Axelrod & Hamilton, 1981; Nowak, 2006).

This perspective might also help explain the generally negative valence of possession, that is, the fact that possession is almost always considered intrusive and undesirable to the possessed person, as well as destructive for the community as a whole. When people suddenly undergo significant sociomoral change, as did Phineas Gage, the result would normally be for the worse; disease and trauma are unlikely to improve one’s
moral functioning, but very likely to impede it. Intuitively, such a change would constitute a breach of identity. The sufferer would no longer be thought of as the same person. A different and more sinister source of behavior, such as an invading spirit, would have to be posited.

The Horror Genre as a Cultural Artifact

The horror genre—a cultural artifact born of ancient, evolved substrate—has embraced the notion of possession (Moreland, 2014). This particular genre, which takes its name from the emotion that it prototypically seeks to elicit, is a mainstay of popular entertainment and a global phenomenon. It works by transporting audiences imaginatively into threatening fictional worlds that are usually populated by frightening characters (Clasen, 2012a), and audiences, in turn, respond with absorbed emotional engagement. The emotions elicited by horror—ranging from fear and disgust to anxiety and dread—evolved as part of an adaptive fear system that functions to keep organisms alert and alive in dangerous environments (Öhman & Mineka, 2001).

The characters that usually populate horror narratives tend to be supernormal (i.e., artificially exaggerated) and/or supernatural reflections of ancestral dangers, such as predatory mammals, slithery reptiles, nasty pathogens, and human assailants (Clasen, 2017). Consider the huge monster that wreaks havoc on Manhattan in Cloverfield (Reeves, 2008) as an example of a supernormal predator, or the many zombies that roam popular culture as examples of highly salient, disgust- and fear-evoking monsters. Such familiar horrors work because they channel and amplify deep-seated fears of ancestral origin. Horror entertainment, then, operates in such a manner as to tap into an evolved mechanism for survival, and is especially efficient and effective when the depicted
horrors converge with ancestral fears. One particularly salient set of fears is targeted by movies falling into the possession horror genre.

**Possession as a Horror Trope & Cultural Artifact**

Like the monstrous threats found in other forms of supernatural horror, the threat depicted in possession horror—an evil non-material entity that takes over a protagonist—is hardly realistic. But because the notion itself fits well with evolved psychological tendencies, such horror films have the potential to profoundly unsettle audiences (regardless of those audiences’ conscious beliefs about spirits and demons). The horror scholar Moreland emphasizes the “association in Western popular culture between spirit possession and the horror genre,” and claims that this conventional association explains why “the majority of fictional portrayals [of possession] are resoundingly negative” (Moreland, 2014, p. 221n1). However, conventional association alone cannot account for the noted affinity between horror and possession. We argue that the horror genre has embraced the trope of possession because the concept of possession is inherently (i.e., innately) disturbing, and that evolutionary psychology helps us understand why that concept is inherently disturbing. In what follows, we focus on two examples of horror media that centrally feature possession—one is the film *The Exorcist* (Friedkin, 1973) from the so-called first wave of horror possession films (Moreland, 2014), the other is the internationally popular television show *Supernatural* (Kripke, 2005-) from the second wave. (The first wave is 1970s-1980s, and the second wave begins in 2004, with the resurrection of the *Exorcist* franchise.) (Moreland, 2014).

*A Case of Possession Horror: The Exorcist (1973)*
The Exorcist is perhaps the most famous possession horror film of all time (adapted from one of the most well-known horror novels of all time, William Peter Blatty’s 1971 novel of the same title). The film depicts a twelve-year-old girl, Regan McNeil, who is possessed by an ancient and evil demon, Pazuzu. The demon takes control of Regan’s body and makes her say and do vile things. Apparently, the real Regan’s consciousness is still trapped somewhere inside her, as she manages to write the words “help me” on her stomach in a memorable scene. Somehow, the real Regan briefly, covertly, manages to bypass the demon’s consciousness. But during her possession, it is the evil entity that exerts control—and Regan’s body becomes ever more diseased-looking as the possession continues. Her body degrades, with running sores and various deformations, and her behavior becomes increasingly vile and overtly antisocial. What begins as minor norm violations—urinating on a rug at her mother’s party, using nasty language—evolves into fully-fledged homicidal behavior. The audience is left with no doubt that the demon Pazuzu is evil. This is a powerful depiction of a disembodied consciousness that is able to supplant another’s consciousness.

It is common in possession horror to depict the mental struggle of the possessed against the intrusion of the hostile spirit, as in the case of Regan. Victims are desperate to retain control of their bodies and to suppress the foreign impulses that threaten to overtake them. In The Exorcist, when Pazuzu toward the end of the film is possessing Father Damien Karras, he writhes and screams with agonized exertion. Just as his possessed self is about to strangle Regan, whom Pazuzu has now left for Karras, we witness Karras tear himself away from her and dive through the bedroom window to his death. The audience is quite clearly meant to interpret this scene as a furious battle
between the ethereal powers of Pazuzu and the mental fortitude of Karras, who can only hope to resist for a brief moment.

We propose that this and other possession scenes are naturalistically underpinned by the phenomenology of emotion regulation. What the characters are depicted as going through is something like a temper tantrum that they struggle willfully to suppress. It is the experience of one’s reflective and deliberative self being overcome with hot emotion, such as when you “lose yourself” in a fit of laughter or destructive rage. Any viewer with a vibrant emotional life will be all too familiar with such impulses and their effortful suppression. In this way, possession horror manages to communicate what it might feel like to be possessed—to be assailed spiritually rather than physically—in a readily discernible manner. In addition, the possession trope allows the film to frighten viewers by constructing a character—possessed Regan—who is unnaturally strong, deeply unpredictable, unmistakably evil, and dangerously volatile; all of which is motivated by the intuitively compelling notion that an evil demon with magical powers possesses her.

The horror of The Exorcist, which is frequently mentioned as the scariest film of all time, emerges partly through depictions of the conceptual horror of possession by an evil entity, partly through immediately frightening depictions of a dangerous and unpredictable evil agent, and partly through depictions of viscerally disturbing material (mainly Regan’s diseased-looking body). The visually revolting material elicits disgust through the activation of a psychological defense mechanism that evolved to protect us from pathogens and parasites (Tybur et al., 2013). When the camera shows us Regan projectile vomiting into the face of a priest, we recoil because the scene activates our innate sense of disgust. The substance expelled by Reagan appears to be something that
could be detrimental to our health were it to be ingested or contacted in any way. This choice of motif is no accident and no arbitrary cinematic convention. As researchers in moral psychology have demonstrated, people tend to run together concepts of physical and moral beauty and ugliness (Kjeldgaard-Christiansen, 2016; Tsukiura & Cabeza, 2011). Regan’s turning nasty in a moral as well as a physical sense—with her physical transformation being symptomatic of her inner state—is intuitively compelling. It effectively communicates the gradual usurpation of Regan’s pure being by Pazuzu’s malice and inner ugliness.

Secondarily, *The Exorcist* manages to disturb viewers by depicting the almost-total loss of agency—and to make matters worse, the loss of agency to an evil entity. Losing control over one’s body is bad enough, and presumably a universal and evolved fear (because agency is so crucial to basic adaptive functioning in the physical world, like finding food and avoiding danger), but having one’s body taken over by another entity—and an evil entity at that—is worse. We speculate that the horror of being possessed by an evil agent results predominantly from eliciting an evolved fear of control loss, but also—secondarily—from eliciting fear of being compelled to harm one’s loved ones, one’s self, and/or one’s reputation. If another entity controls one’s body and that entity makes one’s body do harmful, immoral things, then one potentially suffers fitness losses as a result of self-, kin-, or reputational damage. To compound these fears, the concept of possession arguably also elicits moral and perhaps visceral disgust at the thought of being parasitized by another agent. This would help explain why possession, even by a benign entity, is generally unattractive to people.

*Another Case of Possession Horror: Supernatural (2005-)*
The long-running television show *Supernatural* teems with frightening antagonists, from enormous arachnids to wendigos and zombies, but the trope of possession (by demonic as well as angelic forces) features prominently throughout the series. As in *The Exorcist*, *Supernatural* works from the premise that people consist of a physical body as well as an immaterial soul, and that other immaterial beings—souls, in the form of demons or angels—can take over a body and replace or suppress its soul. However, *Supernatural* attempts to exploit viewers’ intuitions in its depiction of possession by visualizing the possessing agents as dense smoke (usually black, but sometimes—in the case of high-ranking demons—red). This is an ingenious way of communicating to the audience that something non-physical, like a malicious spirit, is interacting with something physical, like a human body. The trope supports the audience’s evolved intuitions that the spirit somehow acts in or through physical reality without being a tangible part of it. In *Supernatural*, the smoke enters the victim of possession through the mouth. Presumably, this choice of entryway for the possessing agent reflects an intuition about the transformative potential of substances that enter the body through the mouth: “You are what you eat.”

Moreover, *Supernatural* at key dramatic moments telegraphs to its audience (and characters) that someone is possessed by depicting them with pitch-black (and occasionally ruby-red) eyes with no visible sclera. (Unlike *The Exorcist*, however, possessed characters do not in general look diseased in *Supernatural.* ) It is a cinematic convention to depict demonic entities with such eyes, but the convention is not arbitrary—it presumably evolved because humans are highly attuned to other humans’ mental states (see also our discussion above regarding theory of mind), and one of our
primary cues for gauging others’ mental states is their eyes, which convey information about attention and emotion (e.g., Jack, Garrod, & Schyns, 2014). The prevailing idiom that “the eyes are the mirror of the soul” rings true because human eyes evolved to carry rich social information.

Depriving us of that information, through masking of the white sclera, which possibly evolved (partly) as a social signaling device (Kobayashi & Kohshima, 1997), is unsettling. It moreover works to make the human, whose eyes are unreadable and perhaps unpredictable, “creepy,” in the parlance of the horror genre (McAndrew & Koehnke, 2016). In short, Supernatural exploits evolved dualism in its use of demonic possessing forces to unsettle viewers. In contrast to The Exorcist, however, characters can also be possessed by disembodied angelic agents, yet the show depicts such benign possession as unattractive, presumably because, as mentioned above, the very concept of total loss of autonomy is disturbing to humans.

**Dualism and Possession Horror**

The concept of possession is intuitively resonant and frightening—especially so when the possessing agent is evil and the prospect of possession also evokes a fear of infection (literal and metaphorical) and unintentional harm. That is why the trope has found a welcoming home in the horror genre. The fact that these fears are deeply embedded in human nature helps to explain why humans appear so widely impacted by horror films featuring possession. To be sure, culture obviously plays a significant role in promoting or suppressing such universal fears. Stephen King, in his non-fiction treatise about horror, Danse Macabre, claims that The Exorcist “did only so-so business when it was released in West Germany” (King, 1983, p. 139), a much more secular country than
the US, where the film’s supernatural plot might seem more plausible. In Denmark, one of the most secular countries in the world, The Exorcist had less of an impact than it did in the US, though the Danish news did report stories of audience members fainting and vomiting (Clasen, 2012b). Indeed, a study on personality and horror preference found that people who believe in the supernatural tend to be more frightened by supernatural horror than are people with no such beliefs (Clasen, Kjeldgaard-Christiansen, & Johnson, 2018). Thus, universal psychological dispositions interact with cultural context and individual personality (including beliefs) in ways that influence the individual reception of possession horror films. A devout Catholic is likely to be more frightened by a horror film featuring possession by an evil demon than a non-believer. Still, even non-believers can be deeply affected by supernatural horror films because those films tap evolved psychological mechanisms.

**Conclusion**

An understanding of evolved psychological architecture helps shed light on cultural artifacts and practices. Thus, we have hoped to show that research on consciousness, Theory of Mind, and intuitive beliefs about mind-body dualism help explain the prevalence and power of the trope of possession, as well as that trope’s affinity with the horror genre. Conversely, the prevalence of supernatural horror films featuring evil possessing agents tells us something about evolved cognition. It tells us, for example, that our intuitive beliefs can readily be exploited by artificial cues, such as are found in horror film.

On a larger scale, the invention and dispersion of possession myths across virtually every human culture illustrates a key point about where culture “comes from”
and provides snapshot of how it evolves. Cultures, and their constituent mores, practices, beliefs, and traditions, arise from the psychological functioning of individuals residing in them (Pinker, 1997). The deep psychological origins of culture, however, do not preclude the possibility of change. Cultures do change over time, mores shift, fads come and go, and all of these factors can exert influences back in the direction of individuals residing in certain cultures (Pinker, 1997). Tracking the evolutionary origins of culture across the timeline of our species will involve an integrated analysis of both the neurological and psychological evolution of early hominids, as well as the top-down effects of cultures on genetic evolution (Boyd & Richerson, 1985; Lumsden & Wilson, 1981). In the current study, we attempted to illustrate part of this process through the global myths of possession. We hope future research will extend and empirically test the hypotheses about the evolved psychological underpinnings of possession horror outlined in this article.
References


