

Evil Voices in Popular Fictions: The Case of *The Exorcist*

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IN WILLIAM FRIEDKIN'S ICONIC HORROR FILM *THE EXORCIST* (1973), an adolescent girl, Regan MacNeil, is possessed by an evil demon that makes her act in increasingly erratic and immoral ways. She starts to swear and urinates on the floor at a house party. Later, she violates herself with a cross, violently attacks her mother, and goes on to murder two people: a friend of the house and a Catholic priest come to save her soul. But it is not just Regan's behavior that changes. The demon also corrupts her lively, girlish voice, turning it deep, growly, guttural, and wholly unrecognizable.

There is something strange about Regan's voice changing as a result of her possession by an entity of pure evil. After all, the moral notion of evil concerns what people think and do, and not what they sound like. Yet the change of voice registers to the viewer as somehow congruent and meaningful. Regan's new voice seems the natural *expression*—the metaphorical “pressing out”—of her corrupted inner subjectivity. This is as the creators intended. In Kermode's *The Fear of God* (BBC), a documentary on the making of *The Exorcist*, sound designer Ron Nagle discusses his team's extensive experimental efforts to find the right voice for possessed Regan. Multiple voice actors were cast and countless mixing techniques attempted. The goal

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of all of this trial-and-error was specified not at the level of objective acoustics, but impressionistic effect. Possessed Regan was to sound like “whatever we in general consider to be evil.” These efforts eventually proved successful, as witnessed by the film’s immense cultural impact and Academy Award for sound design.

Popular fictions are rife with voices that, as Regan’s, signal moral corruption. The clearest examples may be cases in which a good or neutral character becomes evil and the character’s voice changes as a result. This is what happens to Regan, and, as another example, to Spencer Tracy’s hoarse and breathy portrayal of Mr. Hyde in *Dr. Jekyll and Mr. Hyde* (Fleming). Also illustrative are cases in which villainous characters are suddenly exposed as such and change their voices to match their roles. In Columbus’s *Harry Potter and the Philosopher’s Stone*, the soft-spoken, stuttering Quirrell markedly deepens his voice when he is caught out. In Lucas’s *Star Wars Episode III – Revenge of the Sith*, when Senator Palpatine is finally exposed by the good Jedis, his voice deepens, roughens, and hoarsens. There is no longer any point to him hiding his true self, so he speaks—and vocalizes—freely. This well-known trope was parodied on the British sketch show *That Mitchell and Webb Look* (Mitchell and Webb). A Poirot-esque character accuses the posh Mademoiselle Brown of murder. Brown, who mistakenly assumes that the accusation rests on solid evidence, lashes out in a haughtily malicious tone. This settles the matter for the investigator: “I always know I’ve got them when they start doing the evil voice!” (Season 3, Episode 1).

Applying the theory of conceptual metaphor (Lakoff and Johnson, *Metaphors We Live By*) to voices in popular fictions suggests that voices can be made to seem evil if they give the impression of being *impure*, that is, sickly, infectious, and broken. The reason is that immoral thoughts and behaviors are metaphorically conceptualized as a form of sickness, and this moral sickness finds embodied expression in a sick voice.

Moral Metaphors

The concept of purity is endemic to moral discourse (Haidt, *The Righteous Mind*). We speak of being pure of heart or soul, and of dirty consciences and dirty deeds. Even abstract entities like corporations

and world views can be described as “vile” or “disgusting” if they are perceived to be morally egregious, and they can make you “feel sick.” Similar expressions are found in many cultures. For example, morally exemplary Danes are said to have *et rent hjerte* (“a clean heart”), whereas a lawbreaker is said to have *en plettet straffeattest* (“a stained criminal record”). In Mandarin Chinese, a person of unquestionable character may be described as 冰清玉洁 (“clear as ice and pure as jade”). Moreover, a proclaimed ideal of moral purity characterizes all of the world religions and is commonly prescribed in many different versions of ritual “purification,” including the Christian baptism, the Wuḍū’ in Islam, and the mikveh in Judaism.

Of course, even a fully villainous act is not literally “dirty.” Equally, saying that someone has a “clean” conscience does not correspond to a claim about that individual’s personal hygiene. These statements are metaphorical, but that does not make them misleading or meaningless. On the contrary, notions of moral purity and impurity may be intrinsic to how humans *conceptualize* morality. This possibility has been influentially argued by the philosophers George Lakoff and Mark Johnson, whose well-known collaborations on conceptual metaphor theory (CMT, [Lakoff and Johnson, *Metaphors We Live By*](#)) show that humans understand abstract matters by relating them metaphorically to concrete objects and experiences (see also [Gibbs, *The Poetics of Mind*](#)). For example, the concept of a theory may be apprehended in terms of a physical structure. A theory, like a physical structure, can have strong or weak “foundations,” and it may “collapse” if it is “undermined.” In this case, the *target domain*—the concept that is to be understood—is that of a theory, an abstraction that may be difficult to grasp. The *source domain* of a physical structure is the conceptual domain that the thinker uses as the metaphorical basis on which to apprehend the abstract target domain. According to Lakoff and Johnson, humans live by such metaphorical mappings between domains of experience. These mappings ultimately arise from our embodied interaction with the world, such that “our conceptual systems draw largely upon the commonalities of our bodies and of the environments we live in. The result is that much of a person’s conceptual system is either universal or widespread across languages and cultures” ([*Philosophy in the Flesh*](#) 60). Accordingly, empirical studies have demonstrated that many conceptual metaphors are found cross-culturally, and that adopting one conceptual

metaphor over another can influence judgments and reasoning about time, the self, illness, conflict, public health, crime, and climate change, among many other subjects (Gibbs, “Evaluating Conceptual Metaphor Theory”; Lakoff). More than just a figure of speech, then, metaphor is a figurative mode of thought.

In the case of morality, Lakoff and Johnson propose that purity is a central and organizing metaphorical source domain:

Just as physical impurities can ruin a substance, so moral impurities can ruin a person or a society. . . . If a person’s moral essence is pure, then that person is expected to act morally. If someone’s essence is corrupt, that is, if it has been made impure by some evil influence, then he or she will act immorally.

(*Philosophy in the Flesh* 308)

The conceptual metaphor of purity highlights the social-affiliative functions of morality. Moral judgments are not primarily about praising or blaming individual, isolated acts. They are about ascertaining the assumedly enduring moral *characters* of other people so that one can know what to expect from them and whether or not to affiliate with them (Aristotle; Uhlmann et al.). But someone’s character cannot be seen or touched for concrete assessment. It is an abstract entity that must be inferred, and the conceptual metaphor of purity can ease that inferential process. As moral psychologist Jonathan Haidt put it in a seminal article from 2001:

[B]ecause we all have experience with foods that are easily contaminated, we come to equate purity and cleanliness with goodness in the physical domain. We learn from experience that pure substances are quickly contaminated (e.g., by mold, dust, or insects) when not guarded and that once contaminated, it is often difficult to purify them again. These experiences in the physical world then form the basis (in many cultures) of *conceptual schemes* about moral purity.

(“The Emotional Dog and Its Rational Tail” 825, emphasis added)

By “conceptual scheme,” Haidt meant what Lakoff and Johnson term a conceptual metaphor: the metaphorical mapping of one experiential domain onto another. Haidt argued that the conceptual metaphor of purity in particular made sense of previous findings, by himself and by others, that members of diverse cultures not only

spoke of moral purity, but also reported disgusted feelings in response to moral violations (Rozin et al., “The CAD Hypothesis”). Apparently, people’s conceptualizations of moral violations as impure, vile, and contaminative produced feelings that were in line with the metaphorical language.

Haidt’s 2001 article influentially argued that human moral judgment is largely an emotional and intuitive affair, with conscious reasoning acting mostly to rationalize moral sentiments that it had no role in producing. This emphasis on emotion, together with the supposed role of metaphorical purity in shaping moral sentiment, set the stage for a renewed interest in the role of disgust in moral judgment (May). Subsequent studies confirmed that disgust is commonly experienced in response to moral violations, and especially in response to moral violations of the body, such as rape, incest, and self-harm (Giner-Sorolla et al.). Haidt and colleagues even argued that there is a special type of disgust, sometimes labeled “socio-moral disgust,” which responds to moral violations with nausea and revulsion, and which is associated with the denunciation of socio-moral outgroups, such as homosexuals or immigrants (Rozin et al., “Disgust”; Tybur et al.). What differentiates socio-moral disgust from disgust proper is precisely its metaphorical, or “symbolic,” logic. Socio-moral disgust responds to symbolic impurities, including the “pollution” or “infection” of one’s community by outsiders perceived to be immoral, or the symbolic “defilement” of the soul, a venerated ritual, or a way of life.

To be sure, the nature of the relationship between moral violations and disgusted feelings remains disputed.¹ However, there is no question that *ideas* of purity and disgust permeate the moral domain, with appreciable social consequences. Thus, cross-cultural work in social anthropology shows that diverse cultures frame moral questions in terms of cleanliness, infection, and pollution (Douglas), and psychological experiments demonstrate the efficacy of such framings in changing moral attitudes (Feinberg and Willer). Moreover, moralists have a long history of invoking disgust as an argument for the moral sanctioning of peoples and practices. A well-known example is bioethicist Leon Kass’s admonition that there is “deep wisdom”—an intuitive sort of moral truth-tracking—in “repugnance,” wherefore we should heed our repugnance toward cloning and ban the practice (687). Philosopher Martha Nussbaum has shown that this moral

appeal to disgust runs through religious, political, and legal discourses, where it has been used to oppress “Jews, women, homosexuals, untouchables, lower-class people—all of these are imagined as tainted by the dirt of the body” (347). Such appeals assume a shared understanding that disgust matters morally. If they did not, they would be signally circular. The fact that disgust can in this way function as a *prima facie* moral justification is powerful evidence that there is meaningful conceptual interfacing between morality and notions of purity.

Impure Essences and Immoral Characters

God bless me, the man seems hardly human! Something troglodytic, shall we say? Or can it be the old story of Dr. Fell? Or is it the mere radiance of a foul soul that thus transpires through, and transfigures, its clay continent?

Robert Louis Stevenson (*The Strange Case of Dr. Jekyll and Mr. Hyde*
14)

Such fictional symbols of moral corruption as Mr. Hyde, Dorian Gray, Shakespeare’s Richard III, Voldemort, Gollum, and Regan MacNeil share in associating the immoral with the impure and the revolting. Media scholars have employed the moral psychology of disgust to explain why antagonistic characters are portrayed as impurely counter-normative in various ways, including by having them engage in revolting taboos (Vaage) or making them physically unappealing. Carl Plantinga gives the example of James Bond villains:

{These characters’} physical deformities, disabilities, and otherwise unusual physical attributes become metaphors for their malevolence. Many Bond villains are foreigners, by the way, and they also feature, for example, amputated hands that have been replaced by metal ones (Dr. No); pronounced scars, a dead eye, and being bound to a wheelchair (Ernst Blofield); enormous height, a mouth full of metal teeth, and muteness (Jaws); or diminutive smallness (Nick Nack).

(212–13)

In discussing other examples of impure immorality in films, Noël Carroll suggests that “the extension of disgust into the moral realm

is an especially useful form of moral rhetoric in the hands of movie-makers” (14). This modal affinity is presumably to be understood by contrast to the moral rhetoric of literature, which cannot rely on the sensory stimulation of moving images to induce disgust. Indeed, Carroll’s examples are all visual—such as the depiction, in [D. W. Griffith’s *Birth of a Nation*](#), of the African American legislators as filthy and mannerless, and hence disgustingly unworthy of their dignified office (14). But acoustic impurities of voice can be used to the same effect.

How could a voice be revoltingly impure? By sounding sick. The prevailing assumption in both cognitive linguistics and moral psychology is that metaphors of moral purity are sourced in the panhuman concern of pathogen avoidance. In the social domain, as Lakoff and Johnson note, this comes through in the metaphorical equation of morality with health, and immorality with sickness: “Many people in this culture tend to regard impurities as causes of illness. This establishes a conceptual link between Moral Purity and Morality as Health” ([Philosophy in the Flesh](#) 309). Haidt concurs: “It’s not just food that pose[s] a threat: when early hominids came down from the trees and began living in larger groups on the ground, they greatly increased their risk of infection from each other, and from each other’s waste products” ([The Righteous Mind](#) 148). To mitigate the risk of infection, humans evolved what social scientists refer to as a “behavioral immune system,” that is, a suite of psychological mechanisms that “detect the presence of pathogens in the immediate environment and facilitate the avoidance of those pathogens before they make contact with the body” ([Schaller and Park](#) 99). In other words, we evolved to respond with aversion to cues that something or someone might infect us. Visual markers of infection in humans include mucus, pallor, pus, swelling, discoloration, rashes, and decomposition. Because these markers proceed from underlying biological conditions, they implicitly warn of those conditions, eliciting disgust and urging avoidance. Pertinently, there are also voice-based markers of disease ([House and Fisher; Reynolds et al.](#)). A common cold is signaled by a hyponasal voice with reduced resonance and clarity. Viral infections can disrupt the vibratory movement of the vocal folds, often through the intermediacy of laryngitis, producing hoarseness, raspiness, and dryness. Swelling of the vocal folds in particular can restrict or alter the speaker’s expressive range, producing a voice that

is raspy and low in pitch. Bronchitis and pneumonia commonly result in wheezing, coughing, and shortness of breath. Most people are familiar with these voice-based symptoms of infection even if they cannot describe them at a phonetic level. They simply sense that someone “sounds sick.”

There is, then, such a thing as a “sick” voice, which may come to signal immorality. Moreover, the medium of the human voice, as the *ne plus ultra* of expressive organs, may greatly amplify that signal. This is because how someone speaks is commonly seen to reveal who they are and what they are feeling. This understanding is rooted, as are the embodied moral metaphors, in everyday experiences; people often infer a great deal about others from how they speak (Kinzler; Labov). Most obviously, vocal qualities provide clues to the speaker’s sex and age, but they can also be characteristic of someone’s health (as already indicated), socioeconomic status, and current emotional state. For example, socioeconomic status is often associated with specific accents and dialects, such as the historically elevated status of Received Pronunciation in British English or the low status of African American Vernacular in US English. At the level of emotions, angry feelings may be communicated by low pitch, high intensity, and “staccato” intonation, whereas sadness can reveal itself in higher pitch and longer pauses. Impressionistically, one might describe the prototypically angry voice as “low,” “hard,” and “strong,” whereas the sad voice is “high” and “quivering.” Remarkably, people even feel able to identify the personality traits of some other person—whether they are dispositionally dominant, trustworthy, or confident, among other traits—based merely on prosodic features of that person’s normal speech (McAleer et al.). To be sure, these easy inferences are sometimes wrong or simplistic. But such diagnostic overreach is itself evidence for the significance of vocalicity in our social relations, and in our reckoning of another person’s subjectivity in particular (Kinzler).

Vocal signals are often perceived to be especially honest because they can be very hard to control and, therefore, to feign or suppress. For example, speech sounds that are uncommon to one’s mother tongue are notoriously difficult to pronounce correctly. This is why accented speech is the paradigmatic “shibboleth”—a reliable signal of the speaker’s sociolinguistic background, and hence a clue to many other facts about them (McNamara). Likewise, the vocal resonances of intense emotions can be impossible to hide (Scherer et al.). It is as if

the feelings echo through the voice by their intensity and duration, thereby lending the utterance its emotively revelatory aspect: “She could not hide her grief,” we say. “It came through in her voice.”

Thus, the multiply expressive qualities of the human voice are not arbitrarily felt to be the outward expression of inner character. They are surely what inspired the profession, by American poet [Henry Wadsworth Longfellow](#), that “the soul reveals itself in the voice only” (Book III, Chapter III). When warped with cues to infection and sickness, the voice may be perceived to reveal a soul that is likewise corrupted.² For example, in [Robert Louis Stevenson’s](#) *The Strange Case of Dr. Jekyll and Mr. Hyde*, Mr. Hyde’s voice is described as “husky, whispering and somewhat broken.” Together with his “pale and dwarfish” exterior and the “impression of deformity” with which he leaves his interlocutors, Hyde’s voice is one of many “points against him” (14). Another literary example would be [H. P. Lovecraft’s](#) “The Shadow Over Innsmouth,” in which the shady residents of the titular seaport have weirdly corrupted voices. These voices, as well as the voices of the amphibious humanoid “Deep Ones” with which the residents of Innsmouth have interbred, are variously described as “throaty,” “hoarse,” “slopping,” “guttural,” “wheezing,” and “unnatural.” They register to the first-person narrator as “disgusting,” “disturbing,” “repulsive,” and, for the “croaking” Deep Ones in particular, “held all the dark shades of expression which their staring faces lacked” (328). In *The Exorcist*, Regan’s voice changes in much the same way and for a similar reason: to convey moral degeneracy.

The Exorcist

The Exorcist, the 1973 film adaptation of William Peter Blatty’s 1971 novel of the same title, is one of the most popular and controversial horror films ever made. One reason for its notoriety is given by film critic Mark Kermode, who has done much to document the film’s creation and reception. In the midst of the social upheavals in the early 1970s (see [Schulman](#)), he suggests:

The Exorcist presented a credible portrait of the modern urban world ripped apart by an obscene, ancient evil. For the first time in a mainstream movie, audiences witnessed the graphic desecration of everything that was considered wholesome and good about

the fading American dream—the home, the family, the church and, most shockingly, the child.

(*The Exorcist* 10)

That all-American child, sweetly portrayed by actress Linda Blair, is Regan MacNeil. As mentioned in the introduction, Regan's endearing personality is obliterated when an evil demon possesses her. The "giggling, smiling pup, full of hugs and kisses for her mother" (Kermode, *The Exorcist* 31) turns into a vicious and deceitful monster. Her appearance is also transformed. Running sores and pinkish bruises cover her otherwise pale-white body, and yellow-green vomit dribbles thickly from the corners of her mouth. She is disgusting, and her disgusting looks serve to signal her moral corruption. Thus, Kjeldgaard-Christiansen suggests that "[a] foul exterior becomes the manifestation of a foul essence . . . our moral censure of the possessed Regan tracks our revulsion at her physical degeneration" (10–11).

Blair's own, girly voice was quickly deemed unsuited for possessed Regan's demonic emanations. The production team's many unsuccessful efforts to find an appropriately "evil" voice eventually led director William Friedkin to solicit the voice talent of Mercedes McCambridge, who was already famous for her role as Sadie Burk in *All the King's Men* (Rossen), but who had started her career as a talented radio actress. According to Friedkin's memoirs, McCambridge took her job very seriously:

"Let me tell you about myself," she began. "I'm a Catholic. I was also in AA, and I smoked for thirty years. I have two friends who are priests. If I do this, I'll need their advice and counsel at all times. To get the sound you want, I'll have to drink bourbon, smoke, and do other things I haven't done to my body for years."

(*The Friedkin Connection* 136)

These "other things," according to a 1974 *New York Times* interview with McCambridge, included gargling on raw eggs, allowing herself to be tied down with a torn sheet, almost strangling herself with a scarf to produce groaning, and taking inspiration from "people in state hospitals, vegetables in straitjackets, the hopeless, abysmal, bottomless groaning and screaming" to inflect her hellish cries (Higham 13). Every day, McCambridge would "[thank] God

that I had been able to conjure up so much demonic personality” (13). She would later describe her grueling preparations and delivery for *The Exorcist* as one of the hardest roles of her distinguished career (BBC News).

Although sometimes overlaid and mixed with other sounds in post-production, the roughened voice of McCambridge is recognizably the voice of possessed Regan. That voice, heard over the diffusive wheeze of her labored breath, is low, throaty, growly, raspy, and guttural. These dysphonic qualities are associated with infectious disease, which can disrupt the resonant periodicity and harmonicity of the healthy human voice at multiple levels (Schwartz et al.; Reynolds et al.). Pertinently, this result was achieved by means actually known to produce a sickly voice. As with different types of sickness, smoking lowers pitch and increases the overall noisiness of the voice, making it less resonant and giving it a hoarse quality (Gilbert and Weismer; Byeon and Cha). Similar changes may result from heavy use of alcohol, which can also irritate the larynx (Bainbridge et al.). Moreover, McCambridge would deliberately incite her chronic bronchitis for *The Exorcist*. She was aware that chain smoking could help her do that, and for this reason smoked three packs of cigarettes a day in preparation for recordings (Lackmann 114). In an audio interview on her role,³ McCambridge performs the wheezy breathing of possessed Regan and gradually builds it to a monstrous growl. “All it is,” she claims, “is bronchitis.”

Impressionistic labels like “deep,” “hoarse,” and “wheezy” describe qualities of possessed Regan’s voice, but they do not reveal the objective acoustic correlates of those qualities, which may highlight other aspects of McCambridge’s performance and potentially tie them to known pathologies and voice disorders. Using Praat (Boersma and Weenink), a software package for speech analysis, we analyzed multiple clips of both possessed and pre-possession Regan speaking in a neutral, non-agitated voice. Figure 1 presents a waveform and spectrogram of a representative utterance: the demonic voice claiming that it will possess Regan “until she rots and lies stinking in the earth.”

Possessed Regan’s voice is marked by three global characteristics: noisiness, low periodicity, and a low fundamental frequency.⁴ We will now discuss each of these characteristics in turn.

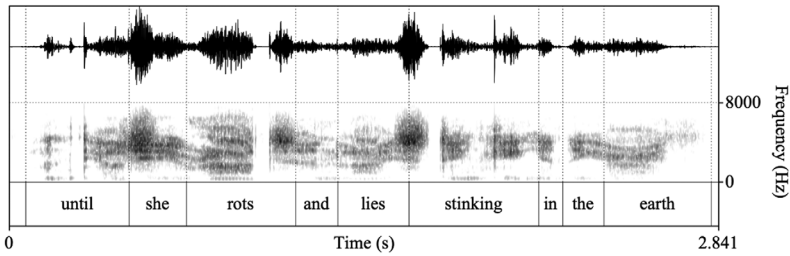


FIGURE 1. Possessed Regan's voice: waveform and spectrogram. The waveform, in the top-half of the figure, represents the amplitude, frequency, and duration of sound waves produced in speech. The spectrogram below is a visual representation of the frequencies that make up the sound over time, with amplitude represented through darkness.

Noise in speech production describes sound generated at random or near-random frequencies. Noise can degrade a voiced speech signal by making it difficult to distinguish the harmonic sounds of vowels and voiced consonants. A noisy speech signal is associated with many diseases that affect the human vocal tract; indeed, the prototypical voice-based symptoms of disease, including wheeziness, raspiness, and general hoarseness, are phonetically describable as kinds of disruptive noise (House and Fisher; Yumoto et al.). In the above spectrogram, the high degree of noisiness in possessed Regan's voice shows in the areas of undifferentiated grayness that overlay most of the speech.

Periodicity in speech production is a measure of regularity in voicing, which is generated by regular vibration of the vocal folds in the production of vowels and voiced consonants. In a standard spectrographic representation of normal human speech, this periodic voicing would display as a dense black *voicing bar* toward the bottom of the spectrogram, that is, at the relatively low frequencies at which these periodic sounds are produced. (A typical voicing bar is visible in Figure 2 below.) However, speech signals can become less periodic when the speaker suffers from voice disorders brought on by infectious disease or other maladies that affect the vocal tract (Yumoto et al.; Shama et al.). Therefore, the faintness of the voicing bar for possessed Regan's voice indicates a degraded and non-harmonic speech signal that can be difficult to discriminate from coinciding noise.

The fundamental frequency (f_0) of the human voice describes the frequency with which the vocal folds vibrate as air from the lungs

passes through the larynx. A faster rate of vibration gives the impression of higher pitch. A young girl, whose small vocal folds vibrate rapidly, will, therefore, typically vocalize with a significantly higher pitch than a grown man, whose larger vocal folds will exert greater resistance on the passing airstream. The fundamental frequency of possessed Regan's speech signal, averaged over 50 seconds of spoken segments, is 92 Hz, which is in the low range of a grown man (about 85–180 Hz) and well below the normal range for an adolescent girl (180–330 Hz) or even an adult woman (165–255 Hz) (Stathopoulos et al.). As already mentioned, an abnormally low fundamental frequency can result from inflammation of the vocal folds, which is typical of many types of infection. In addition, because a low fundamental frequency is associated with physical formidability (Aung et al.), possessed Regan's extremely deep voice may be suggestive of her increased physical strength and therewith of the threat that she poses.

Globally, pre-possession Regan's voice is less noisy, more periodic, and higher pitched than possessed Regan's voice. The cleanest way to illustrate these differences would be to analyze cases in which both pre-possession and possessed Regan speak the same line of dialogue with similar prosody, which does not happen at any point in *The Exorcist*. Fortunately, however, the 25th anniversary DVD re-release of the film (Friedkin) features approximately 50 seconds of original voice track excerpts in which Linda Blair speaks the lines that would eventually be dubbed by McCambridge and further modified in post-production. Contrasting Blair's deliveries with those of McCambridge allows one to match the utterances in terms of word choice, duration, and overall prosody, and thereby to highlight differences that are representative of the actors' divergent performances. For example, the speech segments we used to determine the low pitch of possessed Regan's voice were excerpted from the same lines of dialogue spoken by Blair in the DVD feature. When uttered by Blair, those same 50 seconds of dialogue come out to an average fundamental frequency of 262 Hz, which is within the normal range for a girl of her age.⁵

Consider, as a representative example of the divergences between Blair's and McCambridge's performances, the contrast between pre-possession and possessed Regan producing the phonemes /ə/, /m/, and /e/ in the utterance "Would you like to leave [a me]ssage?" (Figures 2 and 3).

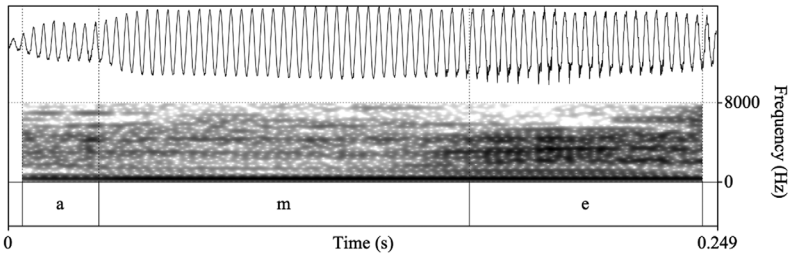


FIGURE 2. Pre-possession Regan (Linda Blair) producing the phonemes /ə/, /m/, and /e/ in the utterance “Would you like to leave [a me]ssage?” The waveform shows a periodic speech signal, and the spectrogram shows a regular voicing bar. (Note that the soundtrack of *The Exorcist*, including the special feature that contains Linda Blair’s version of the demon voice, is ambiently noisy. This low-intensity noisiness, which should be discounted in a vocal analysis, presents at this zoomed-in level as gray “clutter” across the frequency spectrum.)

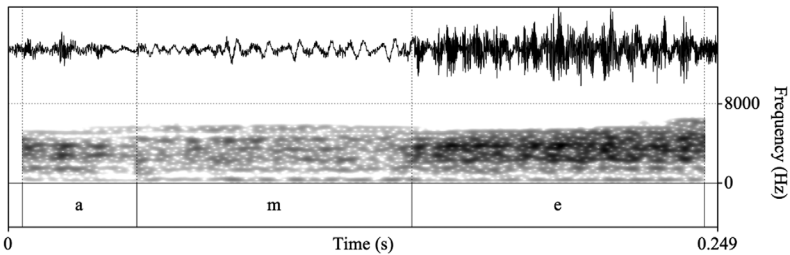


FIGURE 3. Possessed Regan (Mercedes McCambridge) producing the phonemes /ə/, /m/, and /e/ in the utterance “Would you like to leave [a me]ssage?” The waveform shows sudden shifts in amplitude, and the spectrogram shows the lack of an expected voicing bar.

Figure 2 shows Blair’s delivery. The voicing bar at the bottom of the spectrogram evidences regular vibration of the vocal folds and, therefore, a periodic signal. Moreover, the voicing bar forms the darkest component of the speech signal, which indicates clear and resonant articulation that is carried by more acoustic energy than any coinciding noise.⁶ This continual resonance is reflected in the quasi-sinusoidal shape of the soundwave, which repeats regularly and evenly over time. By contrast, McCambridge’s voice, represented in Figure 3, shows no voicing bar, and this absence corresponds to the absence of

any repeated pattern in the waveform. These contrasts indicate that McCambridge's voice is much less resonant and much noisier than Blair's, producing something like a harsh whisper. Note, in addition, the sudden shifts in the amplitude of the soundwave of McCambridge's delivery as well as the overall jaggedness of the waveform. These facets also represent disruptive forms of deviance from Blair's original delivery, in that individual speech sounds are erratically stressed or muted at irregular frequencies (Imaizumi).

At a general level, the acoustic profile of possessed Regan's voice may be characterized as chaotic. Its overall noisiness and aperiodicity disrupt the resonant signal of the healthy human voice. As a consequence, possessed Regan's voice sounds sick—or even sicker than sick, in that her vocal symptoms are exaggerated in much the same way as her physical symptoms are exaggerated. Her horrid looks, for example, are the result of layers of makeup, and her voluminous vomiting is achieved with the help of a mechanical prop and visual effects (Kermode, *The Exorcist* 70–74). Similarly, McCambridge's labored delivery is harsher and deeper than anything one would expect out of a sick adolescent girl.

In keeping with the religious and fantastical themes of *The Exorcist*, these supernatural symptoms diagnose a supernatural evil. Their interpretation is in this way relative to the events and the telling of the story. One could imagine an alternative version of the story in which Regan's vocal and physical symptoms were caused not by a malevolent possession, but by an especially ravaging disease. In that version of the story, Regan's symptoms might largely stay the same and yet suggest nothing about her moral character. This simple thought experiment illustrates that while a sick voice can signal a specifically moral "sickness," it certainly need not always do so. Indeed, many fictional characters have sick voices that seem simply irrelevant to their moral character. Consider Arthur Morgan, the outlaw protagonist of *Red Dead Redemption 2*, a Western-themed cinematic video game. Morgan is gradually weakened by a condition that causes painful coughing and eventually makes his voice wheezy and raspy. After passing out in the street, he is examined by a physician who asks for his symptoms. "I think you've heard them," replies Morgan. The physician plausibly identifies his condition as tuberculosis. In this case, the player understands that Morgan's vocal symptoms have a pathological cause that fully accounts for them in non-moral

terms, and the game's tragic narrative and overall realism support this conclusion. Since the symptoms are easily explained in this way, there is no need to posit any specifically moral malady.

Like Arthur Morgan in *Red Dead Redemption 2*, possessed Regan in *The Exorcist* is gravely afflicted, but the medical establishment fails to trace her symptoms to any known pathology. It is in this way suggested to the viewer that the cause of Regan's symptoms may be spiritual, or moral, in nature. The inference is one of eliminative induction, in that the seeming absence of a pathological explanation makes its only alternative appear more plausible. This type of inference may be typical of cases in which sick voices come to signal moral corruption in fiction. For example, the protagonist of "The Shadow Over Innsmouth" is given no reason to suspect that his shady interlocutors are actually sick, wherefore it becomes especially tempting for him, and for the reader, to interpret their sick voices as being expressive of their moral characters. The ease with which one adopts a moral interpretation is explained by the metaphorical linkage between sickness and immorality, which supplies an anchoring signified for the free-floating vocal signifiers.

Of course, just as it is not the case that all sick voices belong to immoral characters, it is also not the case that all immoral characters have a sick voice. In a sense, some even seem to express its opposite. Consider Anthony Hopkins's portrayal of Dr. Hannibal Lecter, a murderous cannibal, in Demme's *The Silence of the Lambs*. Lecter's voice is clinically calm and collected. He enunciates fully, clearly, and resonantly. There is no sign of vocal disruption. Lecter's voice arguably represents an *aspect* of his immorality, namely its cool, calculating, and supremely intelligent nature. Even so, his voice does not represent immorality as such because intelligence and precision are not moral concepts. If anything, his voice rouses a certain estheticomoral dissonance—a sense that someone who speaks like this should not be able to act like that. It is different with a sick voice. Conceptual mappings between the domains of purity and immorality mean that representations of sickness can be morally evocative in a way that representations of intelligence per se cannot. Sickness can render evil—an entirely abstract notion—to the senses, and therewith to the moral imagination.

Conclusion

Possessed Regan's voice in *The Exorcist* is the result of trial-and-error at multiple levels: in the casting of voice actors, in the vocal performance of McCambridge, and in the post-production editing of that performance. These various efforts were guided by the question, "What might a truly evil being sound like?" and they hit on a voice that is perceived as evil at least in part because it sounds exceptionally sick and broken. This metaphorical account of evil voices integrates objective acoustic dimensions, such as noisiness and periodicity, which broaden its conceptual scope and open it to quantitative inquiry.

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Endnotes

- ¹ Deflationist accounts suggest that what is termed moral or socio-moral disgust may simply be the combination of moralistic anger and (non-moral) disgust (Schein et al.), or that words like "disgust" may sometimes be used synonymously with "outrage" or "moral disapproval," which troubles the interpretation of self-reported disgust in response to a moral violation (Nabi).
- ² This may be why [TV Tropes](#), an online wiki for tropes in popular culture, identifies vocal raspiness, growliness, and deepness as "common auditory clue[s] to an evil character."
- ³ This interview could not be sourced beyond its upload to YouTube by user "David Lemoyre" at <https://www.youtube.com/watch?v=AUocyJRb15M>. Unfortunately, the video was taken down before March 10, 2021. However, McCambridge also discusses her "bronchial" voice, and how she incited it through chain-smoking for *The Exorcist*, in a 1981 interview on the radio show *Fresh Air* (Gross).
- ⁴ For a general introduction to acoustic phonetics, see Peter Ladefoged's *Elements of Acoustic Phonetics* (2nd ed.).
- ⁵ The procedure and detailed results of our pitch analyses, together with a full list of lines of dialogue analyzed, are available as supplementary material to this article (Kjeldgaard-Christiansen et al.).
- ⁶ Technically, the spectrogram shows that the acoustic energy in Blair's delivery is concentrated around the voicing bar, that is, at frequencies below 250 Hz. By contrast, McCambridge's delivery is more dispersed across the frequency spectrum, indicating that it is noisier.

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