Ontology of the Hologram: Gothic Tropes and the Ontological Transgressions of Technoscience

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SCIENCE fiction often provides the lexicon through which we make sense of the novel and the unfamiliar. Damien Broderick has expertly written about science fiction "icons," such as the robot or the spaceship, which recur frequently in science fiction but whose valences change with each appearance. These icons also enter into popular culture, where they serve as reference points for the unknown, and cyberpunk has furnished some of the most recognizable images among them: its futuristic cityscapes, neon lights, and holograms are among the most familiar of visual aesthetics.

It has been striking, then, to trace the discourses around modern-day hologram technologies in light of this fact. Today, holograms proliferate swiftly in the music industry to bring musicians back from the dead and send them on tour. Or, rather, what is created in this way are simulacra: motion-capture photography is used to record the movements of a body double that forms the basis for a 3D digital model, which is then overlaid with a likeness of the artist in question taken from videos. During a "live" performance, this simulacrum goes through a set of pre-programmed motions, lip-synching to recordings of the artist's voice. Science fiction, and cyberpunk in particular, offers no shortage of reference points to describe this technology; *Star Wars*, *Star Trek*, *Altered Carbon*, and *Blade Runner* are but a handful among dozens. So why is it, then, that contemporary media tends to speak of holograms in terms of ghosts and resurrections, describing, for example, the "uneasy pallor" of a hologram "insubstantial like a ghost struggling to fully materialize"? (Binelli) That is, why are the registers of the Gothic, rather than allusions to science fiction, drawn on?

While the absence of science-fictional references in texts about such an "obviously" cyberpunk technology at first seems incongruous, historically the Gothic has often offered a set of conceits and tropes for exploring the distinctions between the categories of life and death, presence and absence, identity and imitation, which

cyberpunk continues to interrogate. Scholars have noted that the similarities between Gothic and cyberpunk fiction go "far beyond the perceived surface aesthetics of both narrative modes to the core questions of being human and becoming posthuman," (Heise-von der Lippe 265). But more than just a shared interest with cyberpunk in metaphysical questions and the production of emotional affect, however, the Gothic also has a history of engaging with these metaphysical questions specifically as a response to new technologies or scientific discoveries that challenge the distinctions between fundamental ontological categories of life, death, and identity. And holograms, in creating the illusion of bringing the dead back to life with perfect precision, seem to transgress our most fundamental ontological categories, pushing against the boundaries between life and death, and the idea of the unique self, that form the foundational truths of our reality. Modern-day coverage of this technology that mines Gothic tropes of ghosts and hauntings, grotesque reanimation and soulless revenants, then, inscribes itself into this history. In this article, I'm interested in more brightly illuminating that history and, in the process, shedding light on another facet of Gothic's close relationship with cyberpunk, and the sources of the significant intersections between the two forms.

Frankenstein

I begin at an obvious beginning: *Frankenstein*, which has been heralded as the text that invented science fiction and given the genre a number of its fundamental icons and tropes. It forged these, however, by drawing on the Gothic to deal with metaphysical questions on the nature of life and death. Gothic monsters, by their very nature, push against neat ontological categories: ghosts and revenants of all sort challenge the neat delineations between life and death, while doubles and doppelgangers challenge distinctions between self and other, presence and absence, and the uniqueness of human identity. Frankenstein's monster fits into this lineage: the genesis of the fiction goes back to a storytelling contest among Mary and Percy Shelley, Lord Byron, John Polidori, and Claire Clairemont at the Villa Diodati—a contest in which they were challenged to write a ghost story, a popular genre in the nineteenth century.

Of course, Frankenstein's monster is no ghost, but he is something of a revenant, and Shelley's inspiration was the question of the source of life; as she recounts in an introduction to the novel, at the Villa Diodati "many philosophical doctrines were

discussed, and among others the nature of the principle of life" (293). She alludes, too, to galvanism, a scientific practice of the day that explored the source of life by pushing at the boundaries between it and death. At its simplest, galvanism refers to the stimulation of muscles with pulses of electrical current. Supposedly, in the 1780s, Luigi Galvani discovered that he could make the muscles of a dead frog twitch by applying electricity. This discovery took off, with many scientists replicating Galvani's experiment upon the corpses of both animals and humans, including a famous public demonstration by Galvani's nephew Giovanni Aldini in 1803, during which he electrically stimulated the limbs of the executed criminal George Foster at Newgate in London. The application of electrical current made the cadaver move and twitch, giving an impression of life and vitality where there was none. Through such experiments, Galvani, Aldini, and their followers were raising the question of the vital force that animates human beings by pushing at ontological boundaries and creating uncanny visions of corpses animated by some kind of unearthly force.

This was Shelley's first vision for the novel: a "student of unhallowed arts kneeling beside the thing he had put together," which stirs "with an uneasy, half vital motion" (293). Consequently, like the surgeons and galvanists of the period, and like the group discussing "philosophical doctrines" at the Villa Diodati, Frankenstein investigates the source of life. He "collected bones from charnel houses; and disturbed, with profane fingers, the tremendous secrets of the human frame," (80) and upon discovering that secret, the monster is literally animated by that knowledge. The creature thus incarnates—again, literally—Frankenstein's transgression, through science, of the boundaries between life and death, and is defined by his duality. He is technically a cyborg, an organic body artificially brought to life through scientific practice, a fact made explicit by Shelley's extensive references to the discoveries of the day and which situate Frankenstein as a scientist, not a magician, and render his creation an enduring icon of science fiction. But the creature is also a Gothic monster. He has the grotesqueness of one: "dull yellow eyes," a "shriveled complexion," and pearly teeth that form a "horrid contrast with his water eyes," such that Frankenstein, "unable to endure the aspect of the being I had created," is filled with "breathless horror and disgust" (85). But mostly, the creature is monstrous because he is a corpse brought to life, a walking and breathing transgression of the categories of life and death, not unlike the bodies that populate Gothic fiction, which are "intrinsically uncanny . . . threshold phenomena precariously suspended between materiality and

immateriality" (Cavallero, 270).

In other words, the original cyborg is a Gothic monster, and with this lineage in mind, we might read cyberpunk as a high-tech Gothic – as a kind of translation into a different mode of a gaze already turned onto the scientific investigation of questions of life and death.[1] In fact, Veronica Hollinger has argued that *Frankenstein* "has been transformed into a precursor text of cyberculture" (192); it "draws attention to how the infinite possibilities of technoscientific creation tend to destabilize human individuality and our sense of self, origin, and purpose" (270). Cyberpunk, with its visions of uploaded, downloaded, and duplicated consciousnesses, artificial intelligences, fragmented identities, holograms, and interchangeable bodies, deals with the transgression of normative categories and ontological boundaries that the Gothic has long investigated with its ghosts, its hauntings, its resurrected corpses and reanimated beings. To upload a consciousness is another form of animation, in the literal sense of the word: to breathe life into a being, to ensoul it, and just as Frankenstein became "capable of bestowing animation upon lifeless matter," (77) the question of whether an artificial, uploaded, digitized, or copied consciousness possesses a "soul," or something of the essence of the original, is a metaphysical question cyberpunk frequently wrestles with.[2]

This lineage illuminates the rhetoric used around holographic technologies today; the ghosts and revenants we find in it are like Frankenstein's monster, a reaction to metaphysical questions raised by technoscientific discoveries. The *New York Times Magazine* article quoted above, titled "Old Musicians Never Die. They Just Become Holograms," bluntly acknowledges this fact, stating that "using technology to blur the line between the quick and the dead tends to be a recipe for dystopian science fiction." This is the one reference to science fiction throughout the article, and it draws attention to the transgression of ontological categories inherent within holograms, a transgression that also resides within Frankenstein's creature. Later in the article, Mark Binelli describes the process of creating holograms: "motion-capture photography records the performance of a body double, which becomes the basis for a three-dimensional digital model, a block of clay animators proceed to modify." "Animator" of course refers here to the digital animation industry, but the word's original root is the Latin anima, meaning soul; to animate is then to ensoul, or, more metaphorically, to breathe life into. This is Frankenstein's original power: he describes his ability to bring a being to life by stating "I possessed the capacity

of bestowing animation," (78) and he proceeds to "animate the lifeless clay" (80). The word clay, of course, has multiple religious connotations, harkening back to the creation of Adam; it casts Frankenstein in the role of a man playing god, attempting to ensoul an inanimate being. As Binelli refers to the "block of clay animators proceed to modify," then, he harkens back to this lineage of Gothic monsters and re-animated corpses responding to galvanism's transgressive practices.

Another evocative description is that of "the lifeless eyes of a corpse propped up between living people," offered by Binelli to describe a holographic Frank Zappa concert. Again, the reference to a lifeless corpse recalls both galvanism and Frankenstein's creature, as a cadaver is forced to move and act unnaturally through electricity (though, in this case, it is not electric current stimulating the muscles, but it is electricity enabling the projection of the hologram). But it is also reminiscent of the fictions of Edgar Allan Poe, who was familiar with the practices of galvanism and mesmerism and drew on them for his Gothic fictions of reanimation and resurrection. A handful of years after Frankenstein's revised edition (1830), he published "The Fall of the House of Usher," (1840) in which the dead Madeline Usher literally rises from her coffin, and "Ligeia," (1838) in which the spirit of the narrator's eponymous beloved appears to animate the corpse of his second wife; in "The Strange Case of M. Valdemar," (1845) meanwhile, a dead body is kept from decomposing for months through mesmerism. Poe, who struggled with death and loss throughout his tragically short life, was obviously fascinated by the distinctions between life and death, and his fiction repeatedly pushed at those boundaries with hypotheticals that toed the line between scientific and supernatural. Contemporary rhetoric around holograms reveals a similar oscillation between technical explanation and Gothic modes of description in its interrogation of similar boundaries.

The Castle of the Carpathians

The second text I examine is not a work of science fiction, but a Gothic one with close ties to the genre. Penned in 1892 by Jules Verne, who by that point had gained widespread fame for his *Extraordinary Voyages*, which laid the groundwork for much science fiction to come, the Castle of the Carpathians is one of those tales in which supernatural effects turn out to have rational explanations—not unlike Frankenstein's monster, whose grotesque and uncanny being is made possible by

scientific research. And in this novel, as in Frankenstein, a Gothic trope—this time of the ghost in a haunted castle—is used to explore what was understood at the period to be an ontologically transgressive technology: the phonograph.

Invented in 1877 by Thomas Edison (though Charles Cros has also been given credit, but he did not provide a working model), the phonograph was articulated as a technology that could allow the dead to speak. The New York Sun, for example, upon a demonstration of the phonograph published an article titled "Echoes of Dead Voices," writing that "Nothing could be more incredible than the likelihood of once more hearing the voice of the dead, yet the invention of the new instrument is said to render this possible hereafter…." In other words, the phonograph was an ontologically transgressive medium, giving voice to the dead and thus allowing them to appear and speak as if alive, and The Castle of the Carpathians realizes this vision of the new medium. The story begins by fully embracing Gothic convention, with Count Franz de Telek finding himself in a mysterious, secluded castle, where he first sees the apparition of his former lover, the dead singer La Stilla, and then hears her voice with "all of its inflections, its inexpressible charm, its modulations – in a word, her voice that was the instrument of that marvelous talent that seemed to have died with the artist herself" (179).[3] Her first appearance is described as a "vague form," (161) then an "apparition," (162) dressed in the same clothes she wore upon her death. Consequently, Franz is convinced that Stilla is somehow, inexplicably, alive, but as it turns out, the inventor Orfanik has been projecting her image and playing a high-quality phonograph recording of her voice. In other words, in a tale that participates fully and explicitly in the conventions of the Gothic, the phonograph is used to realize the genre's trope of the ghost and the haunting; moreover, because the illusion is so realistic that Franz believes that Stilla is alive, the phonograph is able to explode the distinction between alive and dead.

This, again, strikingly resembles how holograms are represented today: just as the New York Sun wrote of being able to speak "long after we have turned to dust," the New York Times describes artist Ronnie James Dio's preparations for his first tour in a decade even though he "has been dead for almost 10 years" (Binelli). Rolling Stone writes of a hologram of Frank Zappa that "the apparition truly looked like an otherworldly version of Frank" (Grow); The Guardian titles their article on the subject "Back to Life," and NPR uses the similar title "Raising the Dead – and a Few Questions – with Maria Callas' Hologram." Wired, in a lengthy piece on

bringing celebrities "back to life," uses the word "resurrection" nine times. There is an obvious history here: as the Vox piece on the hologram "controversy" about bringing dead artists back details, modern-day holograms are really a version of the "Pepper's Ghost" technology, which uses a sheet of glass and reflections to create a spectral-looking figure which was used to add a ghost to a nineteenth-century staging of a Dickens play. As *Wired* points out, this technology "provided a vehicle for the Victorian-era obsession with the supernatural" (Famurewa) at a time when Spiritualism was at its height, but I argue that the story behind the rhetoric used in these pieces goes far beyond the explicit allusions to this tellingly named technology. It is, once again, an attempt to call on Gothic tropes to theorize a medium that explodes ontological categories and distinctions, as was done a century earlier to articulate the uncanniness of the phonograph.

Conclusion

Today, recorded sound (and its twin, photography, which in the nineteenth century was seen as uncanny for its ability to produce a perfect double of an individual) have seeped into our lives so profoundly as to become unremarkable. Neither old photographs nor vinyl recordings provoke extreme feelings of existential anxiety. This is due, in part, to technical improvements: shorter exposure time in photography, for example, means there is no longer the appearance of ghosts due to motion blur. But it is also familiarity: we inevitably adapt to the transgressive ontologies of new technologies and mediums even as we maintain a commitment to the distinctions between fundamental categories such as alive and dead. So, as we wrestle with what it means to reincarnate someone via hologram, I suggest that this technology, too, will one day cease to seem so uncanny, and soon enough, Gothic registers will fade from mainstream discussions of it to be marshalled, instead, in service of articulating the newest ontologically transgressive technology or medium —such as, for example, brain implants that replace our smartphones. In this sense, cyberpunk is already ahead of the curve (as science fiction often is), drawing on the Gothic to engage with technologies and mediums that are far ahead of our present capabilities: cloned bodies, uploaded consciousness, and copied minds are its uncanny doubles and ghostly resurrections.

Notes

1. In this respect, scholars have suggested the term posthuman Gothic, or alternatively cybergothic, to describe cyberpunk fictions that "destabilize ingrained readings and patterns, challenging our understanding of what it means to be human" (Heise-von der Lippe 265).

2. There are other ways this translation might be seen as occurring: the duplication of consciousness and its insertion into multiple bodies is a high-tech version of the Gothic double. And, if posthumanism is about decentering the human, then nineteenth-century monsters, representing anxieties of atavism and evolutionary throwbacks to our more animalistic selves, are a lower-tech decentering of the human.

3. All translations of Verne from the French are mine.

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