James Clerk Maxwell’s Vampire

Stephen R. Wilk introduces a lesser-known work of the great 19th-century scientist—a poem about a blood-sucking monster.

James Clerk Maxwell, born in Edinburgh, UK, in 1831, is one of the icons of 19th-century science and made discoveries in multiple areas. He is, of course, famous for his eponymous equations describing electromagnetic fields and for his book on electromagnetism. In addition, his work in thermodynamics and kinetic theory led to the derivation of the distribution of velocities in a gas, later generalized by Ludwig Boltzmann and known as the Maxwell–Boltzmann distribution. He investigated the rings of Saturn, invented the gradient-index fisheye lens that bears his name and took the first color photograph. The “List of things named after James Clerk Maxwell” Wikipedia page has 32 entries.

None of these achievements, however, give us any idea of Maxwell the individual. Inquisitive and brilliant from an early age, he was always asking “What’s the go o’ that?” or “Show me how it doos” in his heavy Galloway accent. His mother died when he was eight, and he was raised in relative isolation until he was sent to Edinburgh Academy at 10. At first, his rustic clothes and accent set him apart, but he developed a cadre of similarly bookish friends—despite being socially
awkward his entire life. And he was a prodigy, writing his first mathematics paper at 14 on methods of constructing Cartesian ovals.

In addition to his science and mathematical side, he had a literary bent as well. Maxwell had memorized the work of 17th-century English poet John Milton and the Psalms from the Old Testament and began writing his own poetry at an early age. He combined this passion for literature with his love of science and math to create wonderfully quirky poems like “A Problem in Dynamics”—describing, in impeccably correct mathematical terms, the effect of perturbing motion on a hanging chain—“Thomson’s Mirror Galvanometer” and “On the CGS System of Units.”

But Maxwell was not merely a nerdy poet. He wrote love poems, nature poems, imitations of classic poems—and a vampire poem.

**Monster culture**

Maxwell wrote “The Vampyre” in 1845, the same year he wrote his first mathematics paper. Vampires had become popular in the beginning of the 19th century. Military expeditions into the Balkans had brought legends of the monsters to Western Europe, and they began to appear in mainstream literature, with Johann Wolfgang von Goethe’s 1797 poem “Die Braut von Korinth” (“The Bride of Corinth”) and then John Polidori’s 1819 short story “The Vampyre.” This was followed by several plays and an opera, all derived from Polidori’s work. But soon new stories of vampires with novel plots started to emerge, such as the *Varney the Vampire*.
Vampire “penny dreadful” series that started its run in 1845. So Maxwell was following a popular line of monster culture with his own literary effort in his teens, much like a horror film enthusiast writing fan fiction. He wrote the poem in the style of a gothic horror story, and to give it extra verisimilitude, he wrote it in the broad Galloway speech that his Edinburgh Academy schoolmates thought so quaint. In that, it resembles Robert Louis Stevenson’s horror tale “Thrawn Janet,” which came 36 years later.

The poem, excerpts from which appear in the illustrations above and “translated” into modern terms on p. 23, tells of a knight on a mission who meets a strange and beautiful woman. He is diverted from his quest and goes with her in a small boat, and while they travel on the river, she undergoes a transformation into a vampire and ultimately kills the hapless knight.

Vampire and demon

One of Maxwell’s more interesting creations was a thought experiment involving “a being whose faculties are so sharpened that he can follow every molecule in its course.” Such a being, operating a door between two chambers, could separate fast-moving molecules from slow ones, apparently defeating the laws of thermodynamics. William Thomson (later Lord Kelvin) christened such beings “intelligent demons,” and they have been known as “Maxwell’s demons” ever since.

Some commentators have claimed that the deeply religious Maxwell would never have called them “demons.” But it seems to me that someone who could write a poem about a blood-thirsty, vengeful vampire would have no problem calling his benign, thermodynamic-law-violating imps “demons.”

“The Vampyre” by James Clerk Maxwell

Thair is a Knichte rydis through the wood,
And a doughty Knichte is hee,
And sure hee is on a message sent,
He rydis sae hastilie.
Hee passit the aik, and hee passit the birk,
And hee passit monie a tre,
Bot plesant to him was the saugh sae slim,
For beneath it hee did see
The boniest Ladye that ever he saw,
Scho was sae schyn and fair.
And there scho sat, beneath the saugh,
Kaiming hir gowden hair.
And then the Knichte: “Oh Ladye brichte,
What chance hes brought you here,
But say the word, and ye schall gang
Back to your kindred dear.”
Then up and spok the Ladye fair—
“I have nae friends or kin,
Bot in a littel boat I live,
Amidst the waves loud din.”
Then answered thus the douchty Knichte—
“I’ll follow you through all;
For gin ye bee in a littel boat,
The world to it seemis small.”
They gaed through the wood, and through the wood,
To the end of the wood they came.
And when they came to the end of the wood,
They saw the salt sea faem.
And then they saw the wee wee boat,
That daunced on the top of the wave,
And first got in the Ladye fair,
And then the Knichte sae brave.
They got into the wee wee boat,
And rowed wi’ a their micht;
When the Knichte sae brave, he turnit about,
And lookit at the Ladye bricht;
He lookit at her bonie cheik,
And hee lookit at hir twa bricht eyne,