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# WESTERN NEWS

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## Frankenstein



**Frankenstein**  
**and his monster**  
– two centuries later  
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## Research

# Study shakes up fracking, quake conventional wisdom



WESTERN NEWS FILE PHOTO  
Western professor Gail Atkinson says there are promising signs industry can change or modify existing practices to reduce the number of induced earthquakes from fracking, while still getting the results they want.

BY DEBORA VAN BRENK

**O**il and gas companies can influence the number of fracking-related earthquakes they may unintentionally generate by changing the volume of fluids injected during the extraction process, a study by Western seismic expert Gail Atkinson shows.

The volume of material used during fracking is directly related to the rate of induced earthquakes according to the study newly published in *Science*, but the volume doesn't necessarily control the magnitude of the biggest event.

Hydraulic fracturing, also called fracking, entails drilling a vertical shaft into deep shale until it reaches an oil bed, then drilling a horizontal shaft and injecting fluid into the rock to release pockets of entrapped gas. The process has been linked to an increase in seismic activity in some areas.

Atkinson said Fox Creek, Alta., became the "poster child" for study because of a sharp increase in quake activity there after fracking began – with many felt events, including one with a magnitude of 4.4, in June 2016. The area is part of the Duvernay Formation, a geological feature of north-central Alberta rich in shale, oil and gas.

Atkinson is the NSERC/TransAlta/Nanometrics Industrial Research Chair in Hazards from Induced Seismicity and teamed with researchers at the Alberta Geological Survey, University of Alberta, University of Calgary and Natural Resources Canada on the study.

"This is an important finding because some previously held theories propose there is a relationship between the largest magnitude of the earthquake and the injected volume, but what we have found is the maximum magnitude isn't what's being controlled by the volume – it's the earthquake rate," Atkinson said.

The two theories are related, though, because the more earthquakes are induced, the greater the potential a larger one might occur.

"The more we can lower the rate of earthquakes, the less likely the chances we generate a larger one," she said.

She sounded a warning there's no guarantee controlling volume will limit the maximum magnitude of a quake. "Industry still needs to be very careful where they conduct hydraulic fracturing operations. They have to stay away from critical infrastructure to prevent a damaging event."

Atkinson and fellow researchers have previously shown there is a correlation between earthquakes at magnitude 3.0 and higher and industrial fracking operations.

She noted fracking doesn't always cause earthquakes and earthquakes don't always result from fracking. "There are a lot of places people frack and they never generate an earthquake."

Injection volume and geological factors together account for about 96 per cent of the earthquakes in the Fox Creek area, Atkinson added.

During fracking, a mixture of water, sand and chemicals is injected into the rock at high pres-

sure, which causes small fissures to form in the rock and release entrapped natural gas.

The study found injection pressure and rate had an insignificant association with seismic response.

The results of this study may influence policy and practice in the oil fields, Atkinson said.

"(Regulators) would certainly use this to guide policy decision and inform industry," she said. "Industry pays attention to these developments. They obviously don't want to generate earthquakes; that's bad for business."

She said the research also speaks to the importance of assessing cost and benefit and managing risk in industry, or any endeavour. The risk of earthquakes remains low and, while fracking remains controversial and has detractors, it has become an economically feasible way of bringing affordable gas to consumers.

According to Atkinson, there are promising signs industry can change or modify existing practices to reduce the number of induced earthquakes, while still getting the results they want.

"There is some indication industry is getting better at limiting induced earthquakes as the number of induced events has gone down in a number of jurisdictions, like Alberta and Oklahoma, over the past year," Atkinson said. "For a while, every year, the largest event that was induced was the largest to date and we haven't seen anything bigger this year than we have before. That may be a sign industry is figuring some of these things out."

# Frankenstein

## and his monster

– two centuries later



**A** tale born out of a ghost-story competition between Mary Shelley, her husband Percy Bysshe Shelley and English poet Lord Byron, *Frankenstein, or the Modern Prometheus* has exceeded 300 editions and inspired more than 90 films – in addition to hundreds of academic texts and comic books – over the past two centuries.

The book was first published anonymously in January 1818 and continues to be cited today in conversations concerning scientific progress, ethics and human vanity. The 'Frankenstein effect' evokes the spectre of mad science, bad science or science gone wrong; *Frankenstein* still haunts us today and the term has come to be associated with questionable advances in genetics and artificial intelligence, with Dr. Frankenstein's monster often cited as an example of consequence when humankind, by way of science, goes too far.

Two new editions of the book were recently published, *Frankenstein, or the Modern Prometheus: Annotated for Scientists, Engineers, and Creators of All Kinds* and *The New Annotated Frankenstein*, both of which aim to bring Shelley's iconic novel into modern context, referencing robotics, genetic engineering and the novel's vast influence.

Today, *Western News* celebrates the 200th anniversary of *Frankenstein* with insights from faculty across disciplines. We hope you enjoy.



## Frankenstein

# Bequeathals create 'life,' enable research and learning

BY TIM WILSON

Two centuries ago, Mary Shelley was on a trip to Switzerland where she conceived and constructed the idea of Frankenstein. Through countless theatrical and silver-screen adaptations, the novel still conjures ideas of creating a new human from various pieces of humans.

As a member of the Clinical Anatomy group within the Department of Anatomy and Cell Biology, I can safely say we don't do that. At least not physically.

Yes, the medical field has come a long, long way to enhance transplantation from entire organs down to stem cells. We are gaining better understanding of rejection and cellular-level tissue repairs as researchers continue to make magnificent and microscopic strides in our understanding of how skin, bone and tendon reform themselves. Although elusive only a few decades ago, the concept of mending an injured spinal cord seems ever more attainable as modern medicine and therapies catch up to our afflictions.

In my Anatomy classes, I'm always surprised to learn how many of us are walking around with donor or autologous tissues that have aided repair of our injuries. Just this week, an eccentric friend was showing off his new thumb on social media; it was in fact one of his toes moved to that opposable digit on his hand. (Coincidentally, it was in Switzerland near the end of the 19th Century when the first toe-to-hand transfer was performed.)

In my lab, the Corps for Research of Instructional and Perceptual Technologies (CRIPT), we are electronically mixing body parts. Let me explain: We bring together elements of human anatomy through imaging and software.

Using an MRI scan of an anonymized brain, a CT scan of the chest, heart and lungs of a cadaveric donor, the perineum of the National Institutes of Health (NIH) Visible Human Female and legs generated from the Visible Korean, we do indeed make a digital Frankenstein that we have amiably termed 'Frankendaver.' The images are data which comes from all over the world and now lurks on our lab's server. When the lab commenced these studies and sought data, we were surprised at the level of detail and the techniques used to gather it. In addition to the non-invasive imaging of CT and MR, The NIH's 'visible human' is perhaps as close as we get to lab methodologies that Dr. Frankenstein might appreciate. For example, the Visible Human used a criminal condemned to death who gave informed consent to allow his remains to be sectioned transversely and serially photographed for research. With appropriate permissions, labs from around the world can download the gigs of anatomical data.

A few years later came the visible human female with higher resolution scans and thinner slices to avail more detail. Other labs are following those early examples with ever better techniques. Today, the visible Chinese and Korean bodies are examples of how technology and imaging can mix to help form new 'human' forms to aid educators and researchers.

The digital models do indeed lie in wait for students, but not as something voyeuristically horrific; rather, these digital learning objects complement, surprise and inspire many to study medicine, dentistry and allied health sciences such as kinesiology, physiotherapy and occupational therapy. Some educators use the digital models for teaching, while others use Frankendaver models for important research into teaching and learning.

Some students and their mentors in our department employ these electronic approaches for both microscopic anatomy and pre-surgical simulation. They create novel environments morphing scales in virtual reality environments to aid understanding of complex physiological mechanisms, spatial relationships and their

**"We bring anatomy to life through great teachers, staff and graduate student teaching assistants who have a passion for understanding the framework of what we know to be human."**

**- Tim Wilson**  
Professor of Anatomy and Cell Biology

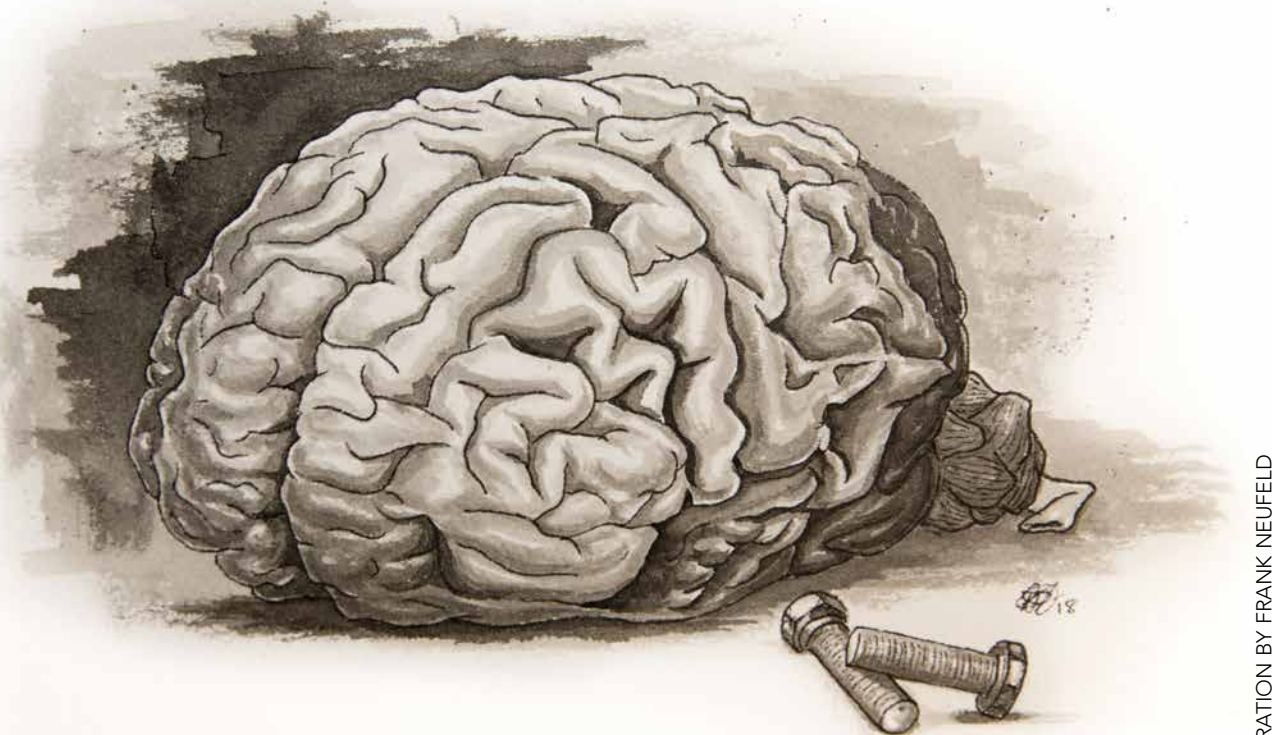


ILLUSTRATION BY FRANK NEUFELD

anatomical underpinnings.

Instead of morphing into new humans, however, they morph reality in hopes of coaxing faster, easier and more enduring learning experiences. This is part of what makes Western a world-class institution. It's not easy work and hundreds of hours are spent poring over apparent minutiae, much like Dr. Frankenstein pored over his 'invention.'

As something more than an aside, talk of modern Frankenstein could not be complete without reference to the Elon Musk of business-meets-anatomy: the controversial Gunther von Hagens. Von Hagens is an anatomist who has developed a methodology for preserving large anatomical specimens through his patented plastination process.

Anatomy plastination represents his science side. The other side of von Hagens, voyeuristic and spectacular, is the creation of travelling road shows called Body Worlds, which some might describe as a macabre Cirque du Soleil. A propos to this conversation is his self-described ability to "unite subtle anatomy and modern polymer chemistry" that enables him to preserve and pose cadavers in natural positions of life, love, sport and beyond.

Can you hear the echoes, "It's alive, it's alive!"

So, no, in our labs, we do not assemble Frankenstein-esque cadavers.

Instead, we 'create' a new generation of caring humans: We bring anatomy to life through great teach-

ers, staff and graduate student teaching assistants who have a passion for understanding the framework of what we know to be human.

While anatomy laboratories cannot be public places, the people who work and study there speak with gratitude and awe about their experiences, challenges and successes.

Significantly, we could not undertake this challenge without the gifts of body bequeathal. These donations are gratefully received as a final contribution to society and are an important component of many students' formation into health professionals who save human lives. For more about the bequeathal process, please visit the information page at [schulich.uwo.ca/anatomy/about\\_us/body\\_bequeathal/](http://schulich.uwo.ca/anatomy/about_us/body_bequeathal/).

Each year, we hold a respectful memorial service that is open to all. I would urge you to attend as we honour the family members and friends of those who have chosen to bequeath their bodies to our program. Students from the previous year share their experiences of personal growth and humble gratitude and describe how the family's loved one became a vital learning partner – a person, a human, who shared life with students seeking to improve the lives of others. In our labs, it is knowledge that has come to life, and it lives on in the novel neuronal synapses of our graduates. **W**

Tim Wilson is a professor of Anatomy and Cell Biology within the Schulich School of Medicine & Dentistry.

## Frankenstein

# Mary Shelley warned me there'd be days like this

BY TIM BLACKMORE

As I stood with my arm hooked around a nearby support, lurching with the train, the pre-recorded male announcer's voice on the intercom gave the usual orders: "Move over, make room at the doors." Nobody shifted, except one teen who exhaled a bored "Whatever," dragging out the 'r' for a few heartbeats.

That was in the late 1980s when Atlanta put in an automated train that ran between its widely spaced air terminals. My first time on an airport subway, I was intrigued. More than that, I was curious no one paid any attention to the announcement.

On a trip through Atlanta a year later, we heard the same announcements – again pre-recorded, but this time with a woman's voice. Everyone moved from the doors when she asked, despite the usual commuter grumbling.

I asked a local about it later and he shrugged, "Yeah, people just didn't do what the guy said, so they put the woman back in."

Why do human beings pay attention to fake female voices and not to male ones? Why do we have digital assistants – whether they run computer searches, take orders to control our house climate or play love interests – that are 'women'? (When in truth they're not anyone or anything, beyond a construct in our heads.)

Would people have paid money to hear a digital Joaquin Phoenix fall in love with a 'flesh' Scarlett Johansson in a film called *Him*? Johansson has by now played a sexually alluring woman converted into a cluster of murderous nano-machines (*Lucy*), an alien sex toy luring men to their deaths (*Under the Skin*) and, more recently, Major Kusanagi, the white-washed cyborg cop in the wretched American adaptation of *Ghost in the Shell* in which she pulls her body apart while killing a tank.

Johansson hasn't been fetishized as a woman so much as a female machine that has in some way gone wrong. We've seen the same script play out with Alicia Vikander in *Ex Machina* – the mother-board fatale. (I have to say, I'm not finding it in my personal ROM to designate these as feminist victories.)

What irony would Mary Shelley draw from these texts, having written her cautionary parable about the reach of science and the problem of men who wish to give birth?

Men giving birth typically hasn't gone well. Men gave birth to nuclear weapons, something the scientists at Trinity spoke about. Oppenheimer's quoting of the *Bhagavad Gita* – "Now I am become death." – seems a commentary on human foolishness, but also about a newborn weapons system that will command its own universe, reframe the world in its own image, open uranium processing plants and create sacrifice zones where no human will be able to visit for millennia.

Maybe Oppenheimer foresaw the chains of missile silos, those rabbit warrens of weaponry, aborning across continents.

Shelley would have known Siri, Alexa, Cortana and the nameless voice haranguing me from my voicemail, are new beings – low-grade artificial intelligences with the capacity to sound coy, cute and enticing. I suspect more than one person out there is having an intimate relationship with some software.

The female artificial-intelligence kick we're on is an extension of Frankenstein's monster. It can talk for itself and can even give instructions, but will be successful only if people believe it can be fully controlled, ordered around, made passive.

This is the new flesh David Cronenberg, working from the text by Marshall McLuhan, brought to electric life in his 1982 *Videodrome*. There, skin was breached in



ILLUSTRATION BY FRANK NEUFELD

**"The female artificial-intelligence kick we're on is an extension of Frankenstein's monster."**

**- Tim Blackmore**  
Professor in the Faculty of Information and Media Studies.

hilariously grotesque ways as James Woods became an all-in-one human VCR and gun holster.

But where Cronenberg was all dire consequences, we're head-down immersed in cheerful acceptance. As long as the collections of subroutines and algorithms have engaging female names and are passively obedient, we won't worry our devices are quickly coming to life. They're getting faster, more mobile and smarter – while we're buried in the digital fire brought to us by the new Prometheans of Google, Facebook, Microsoft, Amazon and Kindle.

Shelley was writing about what technology wants. She understood: Once something is made, it summons its own world, which is likely to be a piece of ours. The Monster, an innocent who's far less monstrous than Frankenstein's world of science that cobbles it together, immediately asks for what it's missing: a mate. (Get busy, Victor.)

Do you recall the precise moment you picked up a smart phone and thought, "From this moment I devote my deepest attention, no matter how inane the things I see, to this screen?" Did you ever actually make that choice or did you inherit it?

Technology cares if you're not interested. People who make a living at this, who venture towards the riches to be made with a new app or digital toy, won't stop giving us technology. They'll make it look like a good deal for us – we're connected (albeit not in the flesh); we know everything (although we don't, really); and we can do everything (except that the machines are now better at learning effects in art and music than we are).

Technology calls out to technology. The question for us is, who or what answers? Are you upgrading because you can, or want to or need to? How much compulsion do you feel?

I was already well trained by the system. Even in the late 1980s on a train between airport terminals, I was following orders, doing what a machine told me to do.

Mary Shelley warned me there would be days – or centuries – like this. I don't fear for the future; I don't think about it. The present machines are so lively and lovely. **W**

Tim Blackmore is a professor in the Faculty of Information and Media Studies.



## Frankenstein

# Embracing the loneliness of monsters

BY CHRISTOPHER KEEP

In the 200 years since its publication, Mary Shelley's *Frankenstein; or, the Modern Prometheus* has engendered endless debate among readers and scholars.

Marxist critics have seen, in the nameless wretch that Victor stitches together from stolen corpses, an image of the emergent working class seeking justice from its factory-owning makers. Feminist critics have seen the novel as exemplifying the anxieties experienced by women writers who occupy the public sphere of letters, or as a critique of the male desire to reproduce without recourse to women's bodies. More recently, one prominent scholar has used the Creature's plight as a way to explore the condition of transgender people and the rage they experience at being placed both inside and outside of normative sexual codes.

The novel's seemingly miraculous ability to speak to every critical school of thought has undoubtedly been a large part of its enduring success.

But, when I have taught the novel, as I do nearly every year in my first-year literature courses, my students almost always remark on something not much noticed by scholars: the profound loneliness of the Creature.

The circumstances of the novel's composition are as famous as the book itself.

In the long, wet summer of 1816, Mary Godwin (she would not become Mary Shelley until the following autumn) was staying with her partner, the poet Percy Bysshe Shelley, and his friend, Lord Byron, at a rented villa on the shore of Lake Geneva, Switzerland. Mary was 18, but had endured more than most young women of her age: her father had vehemently objected to her relationship with Percy (he was married with a child and another on the way when they met); creditors had endlessly harangued the couple about Percy's unpaid debts; the press had made hay of their scandalous relationship; and, perhaps most devastatingly, her first child had been still-born.

The summer in Switzerland was meant to be something of a respite, but the endless rain (a volcano eruption in the South Pacific had sent a plume of ash across Europe, making this "the year without sun") cast a pall over the proceedings. To raise their spirits, Byron proposed each member of the group compose and share a ghost story – the genre having been made popular by a best-selling anthology of German horror tales. Mary was, indeed, anxious about authorship. Percy and Byron were amongst the greatest writers in the world. What could she, a young woman without much in the way of formal education, contribute to such company?

One night, while worrying about the ghost story game, she overheard Byron and Percy discussing the experiments of Luigi Galvani. There was nothing unusual in this. Byron and Percy would often talk about the latest developments in science and the arts, while Mary would sit listening, excluded from the give-and-take of their conversation.

Galvani was an Italian anatomist who had been dissecting a frog when its leg, upon being touched with a scalpel, suddenly twitched as if brought back to life. The retelling prompted Byron and Percy to speculate about the material basis of life. Perhaps life was not some inscrutable mystery known only to God? Perhaps it was an entirely natural process, knowable to the human intellect?

Mary went to sleep that night with their words still whirling in her mind. And she had a dream, a dream that would change everything for her.

As she later recounted in the 1831 edition of the novel:

*I saw the pale student of unhallowed arts kneeling beside the thing he had put together. I saw the hideous phantasm of a man stretched out, and then, on the working of some powerful engine, show signs of life, and stir with an uneasy, half vital motion. Frightful must it be; for supremely frightful would be the effect of any human endeavour to mock the stupendous mechanism of the Creator of the world.*

Mary took note of the dream in her diary and over the course of the next year she completed *Frankenstein*. This tale of its origin, however, is not incidental to understanding the novel. It's a scene the book returns to repeatedly.

After being rejected by his creator, the Creature wanders through the forest until coming upon a family. The Delacys are political exiles, trying to survive the long winter but with little success. The Creature gathers wood and food for them at night. And during the day, he spies on them, eavesdropping through a hole in the cottage wall as the son teaches a young Arab woman the rudiments of the French language and introduces her to the great books of European culture.

Just as Mary sat on the outside listening into a male-dominated conversation she was unable to share, so too, the Creature learns from his place of exclusion. It's an experience that will come to define him.

When Felix comes home to find the Creature making his first, tentative attempts to communicate with his blind father, he is outraged. Fearing for the old man's life, Felix throws the Creature from the cottage and the whole family picks up and leaves. Dejected, the Creature returns again to the forest where he happens across a little girl drowning in a river. The Creature, still full of sympathy for all living things, wades into the water to save her, only to be shot at by villagers.

Rejected by his creator and his adopted family and seemingly by every member of the human race, the Creature begs Victor to make him a mate, a female monster with whom he might share the experience of what it means to be on the outside of human sympathy. Victor initially accedes, but when he comes to give it the spark of life, he revolts at the thought of a female monster giving birth to a "race of devils." In one of the most disturbing passages of the book, he destroys the body. The Creature will have no "other", no companion to share his life. After Victor's death, he seems to walk out of the text altogether, disappearing into the relentless whiteness of the Arctic.

Perhaps, then, it is this that still draws us to a novel written by an 18-year-old woman, 200 years ago. It is this sense that – even in our age of permanent, insistent connection on Twitter, Snapchat or Tinder – we are, like Victor's Creature, somehow still profoundly alone.

Today, two centuries after Mary Shelley wrote of the Creature's need for human connection, the British government has appointed its first Minister of Loneliness. Her name is Tracey Crouch and while her appointment has brought some derision and even scorn, I think she has a big job ahead of her – she might begin by reading *Frankenstein*. ■

Christopher Keep is a professor of English & Writing Studies.

**"The novel's seemingly miraculous ability to speak to every critical school of thought has undoubtedly been a large part of its enduring success."**

**- Christopher Keep**  
Professor of English & Writing Studies.








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# Frankenstein

## Of Frankenstein and the White House

BY STEVEN BRUHM

To read Mary Shelley's *Frankenstein* at 200 is also, coincidentally, to read it one year into Donald Trump's presidency. The novel's subtitle, *The Modern Prometheus*, indicates the folly of a human who steals fire from the gods and assumes for himself divine power, just as Victor Frankenstein attempts to replace God by creating human life from an act of solitary will, rather than the natural means of sexual congress.

While Trump has evidenced no such 'hands-off' attitude toward women, he does share Victor's hubris, practised on a larger political stage. We watch as POTUS blithely disregards the advice and experience of people around him to advance his obsessions, just as Victor Frankenstein fatally disregards his father's advice to avoid the specious alternative sciences of the 'Natural Philosophers.' And, just as Trump's ambitions leave dispossessed peoples in their wake, so too do Victor's ambitions: his young brother William, the servant Justine, Victor's wife Elizabeth and eventually Victor himself. All fall prey to the power-lusts of the Father-God. *Frankenstein* of 1818, then, gives us a window into the toxic masculinity that is so identifiable 200 years later.

The conventional Gothic trappings of Shelley's novel tempt us to identify Victor's toxicity, condemn it and leave it at that. Here is a man who, like so many others of the Gothic genre, shows us masculine oppression writ large.

It's an oppressiveness eagerly targeted by contemporary women's marches against Trump and #MeToo campaigns against sexual abuse of women. But what made Shelley's novel so remarkable for its time is that while it insisted on condemning the misogynistic, narcissistic power Victor assumes for himself, it also made the psychology of that power-lust complicated, ambivalent and self-contesting.

Unlike male villains of today, Victor Frankenstein is interesting. He may emerge from the novel as a villain (a dead one, to be sure), and his murderous Creature may drift off on an ice floe, but the novel never stops inviting us to think about the genesis of men's toxicities, the subtexts of desperation behind the exercise of power and the feeling of dead-endedness in all those masculine pursuits.

*Frankenstein* never justifies or excuses masculinity, but it does make it a subject of study.

Shelley actively resists an assumption we in this millennium sometimes embrace in our encounters with masculine toxicity – that any intellectual engagement beyond denunciation is somehow a betrayal of the victim, a misplaced sympathy for the devil. Shelley is concerned not only with what masculine power does, but with what masculine power is and is not. We too need to understand those nuances today.

At the most obvious level, what masculine power does in the novel is kill people: children, well-meaning friends and, perhaps most importantly, women. Indeed, the Frankenstein's Monster of popular culture places this murdering machine within a panoply of other serial killers: Dracula, Edward Hyde, the Mummy, the Wolfman. But Shelley herself has built no such machine. It is her purpose in

*Frankenstein* to anatomize the story's acts of violence and masculine brutality.

Among the formative experiences that compel the Creature to murderous rage is abandonment by his father at the moment of his birth. Like the Satan of Milton's *Paradise Lost*, which the Creature reads, he is a son obliged to declare war on the father who created and then rejected him. Victor's own early interest in the origins of human life was transformed into a fatal obsession by his father's peremptory declaration that such work is "sad trash," an intellectual dismissal accelerating Victor towards folly while meant to protect him from it.

Well-meaning paternal toxicities continue with the Creature's disastrous relationship with blind patriarch De Lacey, whose son Felix believes the Creature a danger to his family. That domestic toxicity (which proceeds, paradoxically, from domestic love) not only confirms the Creature's thoroughgoing misanthropy, it prepares him for the most important moment of parental cruelty, the Father-Creator's refusal to provide his son a wife.

In the novel's turning point, Victor agrees to 'father' a bride for his Creature, but in this novel families are as toxic and dangerous as they are loving and supportive. Victor fears this next 'child' may be even more malign than the male or, worse still, that his monstrous son might himself become a father, whose "race of devils" would destroy the earth. Witnessing Victor create, and then wantonly destroy his female partner, the Creature vows he will kill Victor's own bride and eventually Victor himself. Thus do responsible fathers behave and protect family.

So what does any of this have to do with reading *Frankenstein* in the age of Trump? Quite a bit.

When I first started teaching this novel, and Gothic novels like it, it was through the theoretical lens of Judith Butler in the late 1980s and early 1990s. To Butler, gender and sexual politics would meet a dead end if merely trying to identify power as it operated at the hands of the empowered, and to resist that power by claiming rights for the disempowered. Butler believed such categories were always too slippery and shifting. (Victor Frankenstein is in many ways a victim in Shelley's novel, as he is the victimizer; the same can be said for the Creature and anyone within a Gothic novel's vortices of power.) Instead, Butler suggested, we must identify the weaknesses inherent in the person expressing power, then exploit those weaknesses in the face of the person himself.

If Victor, if the Creature – and if Trump – present toxic displays of masculine power, that is because such power's toxicity is always eating the male from the inside. Power in these cases is as much about compensating for feelings of loss of power, and for the instability that must deny it is really there.

A powerful man's toxicity is his masculinity, his pride in what he has and his fear he has it to lose. Victor's vanity leads to the deaths of innocent people and ultimately to his recognizing his impotence and powerlessness. It becomes Victor's political demise, as well as his personal downfall. Might we work for the same deflation in that *Modern Prometheus*, Donald Trump? **WN**

Steven Bruhm is a professor in the Department of English and Writing Studies.

**"We watch as POTUS blithely disregards the advice and experience of people around him to advance his obsessions, just as Victor Frankenstein fatally disregards his father's advice."**

**- Steven Bruhm**  
Professor in the Department of English and Writing Studies.



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### The Breaths of Fragrance: The Art of Qur'an Recitation

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### President's Medal for Distinguished Service

#### Call for Nominations

Senate has established the President's Medal for Distinguished Service to recognize those individuals who have provided exemplary service to the university, over a sustained period of time, over and above the normal requirements of their positions.


The award is intended primarily to recognize staff, but faculty may also be considered for work or achievements that would not already be recognized by the professor emeritus designation or other service awards (such as teaching awards) in place.

Nominees must have been retired/resigned from the university in any capacity (including Board or Senate membership) for at least one year prior to consideration and have no ongoing formal relationship with the university.

A nomination form and additional information about the award can be found at:

[uwo.ca/univsec/senate/convocation/service\\_award.html](http://uwo.ca/univsec/senate/convocation/service_award.html)

The deadline for nominations for 2018 is **March 14th**.



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## Frankenstein

# Frankenstein cannot help but remain a text for our time

BY WENDY PEARSON

Cannot think of any film adaptation of Mary Shelley's *Frankenstein* that would pass the Bechdel test. Most have few women characters, women rarely talk to each other and, when they do, it's invariably about men – or at least about males, if we count Victor Frankenstein's creation.

But, then, Shelley's novel wouldn't pass the Bechdel test either.

Women are both peripheral, yet oddly central to the novel, although their main role seems to be to die. Caroline, Victor's mother, dies of scarlet fever while nursing his young cousin, Elizabeth; Justine Moritz, a beloved family servant, is hanged after being falsely accused of the murder of his younger brother, William; Victor himself kills the female monster he has promised to make as companion for his creature; and Elizabeth, Victor's betrothed, dies at the hands of a creation that takes revenge for Victor's destruction of his would-be mate.

Moreover, the story is told by three male narrators (Walton, Victor Frankenstein and the Creature himself) and women have little voice. It is, of course, the enduring work of a young woman – Shelley was just 18 when she began writing it during a holiday on the shores of Lake Geneva and only 20 when *Frankenstein* was first published.

But what, we might ask, accounts for the tale's fascination by feminist and LGBT scholars?

Early feminist criticism, such as Ellen Moer's *Female Gothic*, tends to focus on the text as a mirror of Mary Shelley's life. Even at the young age of 18, Shelley was haunted by the costs of birth. Her mother, Mary Wollstonecraft, died of puerperal fever after her doctor failed to wash his hands; Shelley herself lost her first child, a daughter, in 1815. (Two other children, William and Clara, would be born, only to die as toddlers, and only her fourth child, Percy, would survive her.)

What is perhaps more relevant than Shelley's own tragic narrative of childbirth was the knowledge of how dangerous childbirth was in the early 19th Century. Even today, worldwide, women are more likely to die from complications of pregnancy and childbirth than from cancer. In Shelley's day, infant mortality was commonplace and contraceptive practices were difficult, ineffectual and largely illegal.

As a result of this biographical and cultural context, Moers reads *Frankenstein* as a birth myth, in which a man tries to abrogate not God's right to create but rather woman's unique relationship with reproduction. Moers argues that the infant – in this case, Frankenstein's Creature – is "at once monstrous agent of destruction and piteous victim of parental abandonment."

Scholars Sandra Gilbert and Susan Gubar read the text as a rewriting of *Paradise Lost* and saw the Creature as both feminine and maternal. In readings such as these, "Both Victor and the Creature have been seen as figuratively women," notes Frann Michel in her paper, *Lesbian Panic and Mary Shelley's Frankenstein* in *GLQ: A Journal of Lesbian and Gay Studies* 2. But, Michel adds, "the relation of desire between them has been discussed in terms of heteroeroticism or of male homoeroticism, never in terms of female homoeroticism."

Other feminist scholars have analyzed the novel's messages about women's reproductive role, female agency and male desire to usurp the particular power of giving birth. Frankenstein's fear of female agency is rather obvious. He destroys the female creature because he imagines she may not want to be the companion of the male Creature and then that she might become the forebear of an entire race of monsters: "a race of devils ... who might make the very existence of the species of man a condition precarious and full of terror."

Shelley's text has also been taken up within both queer and trans scholarship. Queer readings of the

**"Frankenstein's Creature is a floating signifier, functioning as a metaphor not just for mad scientists, women or homosexuality, but for anything else made monstrous by social/cultural reaction."**

- Wendy Pearson  
Chair of Women's Studies  
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ILLUSTRATION BY FRANK NEUFELD

text began, following Eve Kosofsky Sedgwick's work on homosociality, by noting the close bonds between males in the text and the suppressed homoeroticism of many of those relationships: Victor's relationship with his friend, Henri Clerval; Victor's with Walton; and Victor's with the monster. In 1995, however, Michel argued the very absence of female homoeroticism in critical readings of Shelley's text marks a type of cultural panic that insists on interpreting possible moments of desire as, instead, moments of identification between the women in the novel.

In 2016, Mair Rigby noted, "Queer criticism has been attracted to *Frankenstein* for the text's representation of monstrosity and excess, as well as its interest in desire, power and transgression." Queer work in general has taken monstrosity to be a synecdoche for queerness in a society where queer has historically been viewed as monstrous. Rigby argued the point in "A Strange Perversity: Bringing Out Desire between Women in *Frankenstein* in *The Ashgate Research Companion to Queer Theory*: "To perform a queer-lesbian reading of *Frankenstein* is not to attempt to discover modern 'lesbians' in the text; it is rather to consider how historical discourses about desire between women inform the novel and shape reading possibilities. Queer-lesbian reading does therefore necessitate a 'woman seeing' perspective."

Frankenstein's Creature is a floating signifier, functioning as a metaphor not just for mad scientists, women or homosexuality, but for anything else made monstrous by social/cultural reaction.

This is the spirit Susan Stryker took up in, *My Words to Victor Frankenstein above the Village of Chamounix: Performing Transgender Rage*, which was published in the first issue of *GLQ* in 1993. Stryker wrote of her intent to recast old analytical narratives and "create new territories, both analytic and material, for a critically refigured transsexual practice. Embracing and identifying with the figure of Frankenstein's monster, claiming the transformative power of a return from abjection, felt like the right way to go."

By 2004, Stryker saw much of the liberatory potential of queer theory defused both by its normalization within the academy and by its inability to gain purchase in the political world of Bush, neoliberalism and the Iraq War. This might have been asking a lot of queer theory but, of course, we live in hope of making change and, as Stryker notes, of finding textual and theoretical homes that provide us with some purchase on the world and make it more livable for ourselves and others.

Readings of *Frankenstein*, with its story of the abject and exiled child, ironically offer an interpretive home for those who find themselves similarly unwanted and made monstrous. At a time when citizens of the United States are retreating from tenuous support of LGBT rights and as women's reproductive rights and bodily autonomy are increasingly under legislative and populist attack, *Frankenstein* cannot help but remain a text for our time. **W**

Wendy Pearson is the Chair of Women's Studies and Feminist Research.

## Research

# Cross-border love a complex affair

Economics, education are factors when migration meets marriage

BY ANIRUDDHO CHOKROBORTY-HOQUE

In the world of Kate Choi, the wedding ring is a portable mini-architect – it builds bridges between people and their families; it shapes entire neighbourhoods and communities.

But before building these bridges, newly arrived immigrants have to break down walls of culture, language, income, education and race.

By examining marital choices of immigrants, the Western Sociology professor is pioneering ways of studying the consequences of international migration.

"In multicultural societies, the spousal choice of immigrants is a barometer of social acceptance and integration. Intimate unions require a higher degree of acceptance, compared to hiring someone or becoming friends with someone," Choi said.

At Western, Choi is continuing research she began as a doctoral student in United States – namely, how does international migration alter marriage choices in both origin and destination countries?

As Choi is finding out, beneath quickening pulses and aching hearts is a steady hand guided by economics, demographics and education.

Mexican migration to the United States is a particularly interesting example because it is 'gender selective,' she said. "Traditionally, 70 per cent of Mexican migrants in the United States are men; since it is for labour purposes, most men who go are of marriageable age."

In Mexico, this opens the pool of potential wives for non-migrating men. And because there are fewer available men, it also limits the pool of potential husbands for non-migrating women.

The average Mexican male immigrant has a Grade 8 education, which is the average level of educational attainment in Mexico.

"A sizable portion of Mexican migrants often work in America for a few years, amass a certain amount of wealth and come back home to live comfortably with family and friends," Choi said.

They then tend to 'marry up' beyond their levels of schooling to more highly educated women who remained in Mexico.

Across the border, it's a similar love story.

Male Mexican migrants who become permanent settlers in America also 'marry up' in education. Their partners, generally Mexican-American women with slightly more schooling, often prefer the newly arrived (but lesser-educated) Mexican immigrants to native-born Mexican-Americans with equivalent educations. From the wives' perspective, the former possess characteristics they don't perceive in the latter, including work ethic and self-discipline.

"Spousal choices are important for the next generation," Choi said. "Marriages between poorly educated and low-income individuals generally relegate their children into poverty;



PAUL MAYNE // WESTERN NEWS

Western Sociology professor Kate Choi is researching how international migration alters marriage choices in both origin and destination countries – pioneering ways of studying the consequences of international migration.

whereas when two highly educated, high-income individuals marry one another, the rich get richer."

International migration reduces these social inequalities in wealth and education; it mixes and brings migrants and the native population closer to one another – despite disparate social, economic, educational and financial backgrounds.

"Racial, social and cultural mixing via marriage ensures greater social cohesion and social acceptance across groups," Choi added. **W**

**"In multicultural societies, the spousal choice of immigrants is a barometer of social acceptance and integration."**

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Sociology professor

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