PROMETHEUS

or

The Modern Frankenstein

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The cast of characters, in order of appearance, are:

Victor Frankenstein	A scientist
Elizabeth Frankenstein	A humanist
The Creature	A Monster
A Contemporary Scientist	A professor
Geoffrey Hinton	A Scientist

Prometheus; or, The Modern Frankenstein

(VICTOR and ELIZABETH, two well-born, charming, cheerful, urbane - perhaps British? - early 19th Century characters stand before us and speak to us directly.)

VICTOR

Hello. I'm Victor Frankenstein.

ELIZABETH

And I'm Elizabeth Frankenstein, née Lavenza.

VICTOR

You may know us from Mary Shelly's book Frankenstein.

ELIZABETH

Written in the year 1818, when Mary was still a teenager!

VICTOR

Or, more likely, you know us from the 1931 film adaptation featuring the flat-headed fellow who moaned a lot.

(THE CREATURE enters briefly.)

CREATURE

Mmmmmrrrr...

ELIZABETH

We're from the book, not the movie. Victor's Creature was rather different in the book.

CREATURE

(Exiting) I do beg your pardon.

VICTOR Mary Shelly's Frankenstein was - - a tale of horror.

ELIZABETH

And of science.

VICTOR Oh yes, a cautionary tale of science run amok!

ELIZABETH A subject you are all well aware of, no doubt.

In my tale-

ELIZABETH

Our tale, Victor, if you please.

VICTOR

Of course, my dear, I do beg your pardon.

ELIZABETH

I was also a Frankenstein, you know, if only for a few hours. But more on that later.

VICTOR

In *our* tale, I discovered a method of bestowing animation upon lifeless matter - - of creating life itself!

ELIZABETH

But what began as an exhilarating endeavor to master the mysteries of the world soon devolved into mayhem!

VICTOR

I created a creature -

(The Creature enters again.)

CREATURE

Mmmmmrrrr!

VICTOR

- but, as it turned out, my creation was malevolent, murderous, and altogether monstrous.

CREATURE

(Exiting) I do beg your pardon.

ELIZABETH

The moral being scientific and technological discoveries may not necessarily lead to human advancement.

VICTOR

Which leads us to YOU.

ELIZABETH

For it is YOU, broadly speaking, who are endeavoring, as Victor once endeavored, to master the great mysteries of your world.

Endeavoring through discoveries such as - - social media!

ELIZABETH

Robotics!

VICTOR

And - - Artificial Intelligence!

ELIZABETH

Oh, yes, Artificial Intelligence.

VICTOR

And it is YOU who are grappling with the question of whether the discoveries of YOUR time will lead to advancement, broadly speaking.

ELIZABETH

Or the very opposite!

VICTOR

To help us grapple with this question and others, we're pleased to welcome a scientist from your time who is endeavoring to master the very mysteries of which we speak!

(A CONTEMPORARY SCIENTIST enters to join Victor and Elizabeth.)

CONTEMPORARY SCIENTIST

Good evening.

VICTOR & ELIZABETH

Good evening!

VICTOR

We're talking about science run amok!

ELIZABETH

A subject with which we're intimately familiar, I'm afraid. But tell us of *your* endeavors, if you would.

CONTEMPORARY SCIENTIST

Well - - I'm a professor of mechanical engineering here at this institution.

A fellow academic! <u>I</u> was a student of Natural Philosophy at The University of Ingolstadt!

CONTEMPORARY SCIENTIST

One area of my research is understanding manipulation. And the way I want to understand manipulation is by building control algorithms, or writing code essentially, to make robots manipulate things.

VICTOR

(Making a strangling gesture) "Manipulate things"? Such as wrapping fingers around a human throat?!

ELIZABETH

Victor, please.

CONTEMPORARY SCIENTIST

The other area of my research is exploring cooperative interaction between multi-robot systems. How should multirobot systems interact with each other, or what information should they exchange between each other, so that together they can perform a bigger task?

VICTOR

Such as wringing the necks of torch-wielding townspeople?!

CONTEMPORARY SCIENTIST

We're just presenting Humanity with new tools.

ELIZABETH

You must forgive my Victor. He is, after all, a character from a cautionary tale of science run amok.

VICTOR

Indeed I am! And in that tale, I entered with the greatest diligence into the search of the philosopher's stone and the elixir of life!

ELIZABETH

He gets like this.

VICTOR

I discovered a method of bestowing animation upon lifeless matter - - of creating life itself!

(Victor laughs maniacally.)

ELIZABETH

Victor, please! We're from the book, not the movie.

VICTOR

I do beg your pardon.

CONTEMPORARY SCIENTIST

I want to make the lives of people better by using this technology.

ELIZABETH

As did Victor, with his technology. I think. But like Victor, I also come from that same cautionary tale, so I can't help but feel a tad bit concerned about your robots.

VICTOR

There is reason for concern! Take, for example, the motion picture *Terminator* starring Arnold Schwarzenegger! Or its sequel, *T2*!

CONTEMPORARY SCIENTIST

Robots are not going to take over the world in ten years. Other technologies must progress in order for that to happen. Also, you can just switch off the power.

ELIZABETH

That is a comfort.

VICTOR

But in Terminator 3: Rise of the Machines-

CONTEMPORARY SCIENTIST

There is not going to be a robot uprising, or AI sentient agents taking over the world and killing people. I can guarantee that's not happening in our lifetime.

VICTOR

Perhaps. But in MY lifetime, I did indeed create a sentient agent.

ELIZABETH

The sentient agent being "The Creature".

VICTOR

After days and nights of incredible labour and fatigue, I succeeded in discovering the cause of generation and life!

ELIZABETH

This was while he was still a student, you understand.

VICTOR

When I found so astonishing a power placed within my hands, I hesitated a long time concerning the manner in which I should employ it.

ELIZABETH

A wise impulse, one which many are encouraging the scientists of today to employ with regards to their own endeavors.

VICTOR

But after my initial hesitation I began the creation of a human being...of gigantic stature; That is to say, about eight feet in height, and proportionably large!

(The Creature enters.)

CREATURE

Mmmmmrrrr!

ELIZABETH

The Creature was considerable, as you can see, and not only sentient but sophisticated as well.

CREATURE

All men hate the wretched; how then must I be hated, who am miserable beyond all living things!

VICTOR

Hurt people hurt people, as the saying goes, self-knowledge which took quite a bit of sentience.

CREATURE

Mmmrrrr.

ELIZABETH

And what of your creations, Professor? Are your multirobot systems sentient enough to understand that hurt people hurt people?

CONTEMPORARY SCIENTIST

I do not think about sentience. We don't understand it at any level. I understand the technical aspects of what makes AI. And from those technical aspects I don't see any reason to believe AI can become sentient.

Well, my creation was certainly sentient - - and a fiend!

CREATURE

I was benevolent and good; misery made me a fiend!

ELIZABETH

And Victor made him fiendishly intelligent - a quality some fear will define your creation as well, professor.

CONTEMPORARY SCIENTIST

Intelligence, as we know it, is embodied.

CREATURE

Meaning that intelligence requires a body to interact directly with the physical and social world in real-time.

CONTEMPORARY SCIENTIST

The fact that you can say that there is intelligence that is *not* embodied, only digital, that's something that you have to really justify. Like in any scientific debate you have to justify why you believe that should be true.

VICTOR

But my creation WAS embodied! To make my creature, I collected bones from the charnal houses; and disturbed, with profane fingers, the secrets of the human frame!

ELIZABETH

It was all very embodied.

VICTOR

I collected the instruments of life around me, that I might infuse a spark of being into the lifeless thing that lay at my feet!

ELIZABETH

Don't ask him how he did it, but he did it!

VICTOR

I saw the dull yellow eye of the creature open; it breathed hard, and a convulsive motion agitated its limbs!

CREATURE

Mmmmmrrrr!

Unable to endure the aspect of the being I had created, I rushed out of the room!

CREATURE

Don't bother, I'll go.

(The Creature exits.)

ELIZABETH

Sentient, sophisticated, and rather sensitive, I'm afraid.

VICTOR

And so, Professor, being fictional characters from a cautionary tale, we can't help but urge you and your colleagues to employ the wise impulse to hesitate.

ELIZABETH

An impulse my Victor ultimately failed to employ.

VICTOR

As you pursue the creation of your creature, we ask you to consider how dangerous is the acquirement of knowledge.

ELIZABETH

Just because a creature is intelligent, doesn't mean it can't also be murderous.

THE CREATURE(O.S.)

I do beg your pardon.

VICTOR

And just because an intelligence is artificial, doesn't mean it won't behave as if it is human.

ELIZABETH

And we all know how humans behave.

CONTEMPORARY SCIENTIST

There is no evidence that human intelligence and what we today think of machine intelligence have the same mathematical principles.

VICTOR

No, but there are other contemporary voices who fear robots and artificial intelligence as we do.

ELIZABETH

Take, for example, Geoffrey Hinton!

(GEOFFREY HINTON enters.)

VICTOR

The psychologist and computer scientist sometimes credited as being The Godfather of Artificial Intelligence.

(Hinton addresses us directly.)

HINTON

It's very possible that humanity is just a phase in the progress of intelligence. Biological intelligence could give way to digital intelligence. After that, we're not needed.

ELIZABETH

A rather dreary prediction, I would say.

HINTON

There is no chance of stopping AI's development! But we need to ensure alignment; to ensure it is beneficial to us! There are bad actors out there, who might want to build robot soldiers to kill people!!

(Hinton exits.)

VICTOR

Robot soldiers killing people? Sounds a bit like *The Terminator* motion pictures, if you ask me.

CONTEMPORARY SCIENTIST

Hinton's assertions are speculative and based on zero evidence.

ELIZABETH

But, he's "The Godfather of Artificial Intelligence"! Surely such a title should count for something.

CONTEMPORARY SCIENTIST

I do not doubt Hinton may actually believe what he is saying. What I doubt is that biological intelligence could give way to digital intelligence.

VICTOR

To be a Godfather is not quite as authoritative as we once assumed, it would seem.

CONTEMPORARY SCIENTIST

AI can't really approach human consciousness and intelligence because it does not have a physical relationship to the world. As long as AI just exists within kind of a disembodied existence it can never really be anything more than a computer.

ELIZABETH

Even so, Professor, a computer is a profoundly powerful tool in its own right. Surely you harbor fears of your own as to how your creation might be employed.

VICTOR

I harbored quite a few fears concerning my discovery of bestowing animation upon lifeless matter.

ELIZABETH

As he said, when he found so astonishing a power placed within his hands, he hesitated a long time concerning the manner in which he should employ it.

VICTOR

Unfortunately, I didn't hesitate quite long enough. For after I rushed out of the room upon enduring the aspect my Creature, my Creature went on a murder spree!

(The Creature enters.)

CREATURE

Mmmmmrrrrr!

ELIZABETH

Creature, please, we are from the book, not the movie!

CREATURE

I do beg your pardon.

(The Creature exits.)

VICTOR

A murder spree which culminated in the death of my dear Elizabeth, I'm sorry to say.

ELIZABETH

On our wedding night!

Hence her being a Frankenstein for only a few hours.

ELIZABETH

On an otherwise magical evening.

VICTOR

I heard a shrill and dreadful scream. It came from the room into which Elizabeth had retired...she was there, lifeless and inanimate, thrown across the bed, her head hanging down, and her pale and distorted features half covered by her hair!

ELIZABETH

And so, Professor, perhaps now you can better understand our desire for caution when it comes mastering the mysteries of the world.

(Beat.)

CONTEMPORARY SCIENTIST

I do wrestle with this question. As scientists, we have to always be worried about where our biases come in.

VICTOR

That is a comfort.

CONTEMPORARY SCIENTIST

We're just presenting Humanity with new tools. It's up to Humanity to use them for good or for ill. Even when a stone was there, people could rub stones to make fire or use a stone to clobber somebody.

ELIZABETH

Indeed. But Artificial Intelligence is a rather considerable stone, wouldn't you say?

VICTOR

Not to mention robots.

ELIZABETH

Either of which could clobber quite a few people.

CONTEMPORARY SCIENTIST

My first anxiety is misinformation. My second anxiety would be worker displacement.

Good anxieties to have, I would say.

CONTEMPORARY SCIENTIST With AI, there is a danger people will use it for misinformation.

ELIZABETH

Which is already happening.

CONTEMPORARY SCIENTIST

Misinformation started propagating on social media. Then social media technology amplified all that. Now this will be on steroids. There will be companies that generate content that looks awfully real. They will synthesize narratives along with videos and pictures. Any point of view you want, you can get compelling fake evidence on that. You can create it much more easily.

VICTOR

And worker displacement?

CONTEMPORARY SCIENTIST

Work will change. Many human workers will be displaced. People will not be getting the jobs they want to do. For example, you will need fewer programmers.

ELIZABETH

We didn't have those in our day.

CONTEMPORARY SCIENTIST

I believe the only way this can be tackled is at a societal level. We need to be aware of what is coming, and we need to educate ourselves as to how to use it properly.

VICTOR

If only such philosophy had been taught at The University of Ingolstadt.

CONTEMPORARY SCIENTIST

We need to have some sort of societal infrastructure that minimizes the effects of this technological shock. Training, whatever it is.

ELIZABETH

Thank you, Professor, for sharing your point of view on these important issues.

CONTEMPORARY SCIENTIST

My pleasure.

(The Contemporary Scientist exits.)

VICTOR

Science run amok!

ELIZABETH Scientific and technological discoveries that may -

VICTOR

- or may not lead to human advancement.

ELIZABETH

It's an issue Humanity has been grappling with for - - well, forever, really.

VICTOR Every age has its technological monsters.

ELIZABETH

The printing press.

VICTOR

The steam powered loom.

ELIZABETH The internal combustion engine.

VICTOR

The atomic bomb.

ELIZABETH

Robots.

VICTOR

Artificial intelligence.

ELIZABETH And, of course, Victor's Creature.

(The Creature enters.)

CREATURE

Mmmmmrrrr!

VICTOR These monsters are tools, it's true.

ELIZABETH But they can also become monsters.

VICTOR They can be used for good or for ill.

ELIZABETH And that, apparently, is for you to decide.

VICTOR

You all may be thinking, well, these people are merely fictional characters from a cautionary tale. Why should we listen to them?

ELIZABETH

It's true, we are.

CREATURE

Mmmmmrrrr!

VICTOR

From the book, not the movie.

CREATURE

I do beg your pardon.

ELIZABETH

But do keep in mind, you all may be characters in your own cautionary tale.

VICTOR

Of course, you won't know the true nature of your tale until the tale is completed.

ELIZABETH

Such is the nature of cautionary tales.

CREATURE

Happy Halloween.

ALL

And good night.

END PLAY