2. FRANKENSTEIN AND THE ROBOTS: TRUTH IN TROUBLE IN OUR TECHNOLOGY

The year 1816 has been called 'the year without a summer'. The volcanic eruption of Mount Tambora in Indonesia in April of the year before had brought on a frighteningly dark, cold, and stormy season in many parts of the world. Under these ominous conditions, by the shores of Lake Geneva in Switzerland, 18-year-old Mary Shelley began writing the world's first science fiction novel. *Frankenstein; or, The Modern Prometheus*, first published in 1818, tells the story of a scientist who builds a humanoid creature from raw materials and brings it to life. The young Victor Frankenstein, horrified by his monstrous creation, abandons it. The monster wanders, lost and lonely, learning through experience to loathe humanity. It ends up destroying Frankenstein and all those close to him.

Frankenstein's monster has become a powerful symbol of humanity's fear of technology and its unintended consequences.

Countless modern stories—think of *Blade Runner* and the *Terminator* and *Matrix* movies—tell a similar story and ask a similar question: What might happen if our technology turns against us?

Once upon a time, I didn't relate to *Frankenstein* so easily. I grew up loving technology. I trained as an electrical engineer. I was more inspired by the science fiction of Isaac Asimov. Asimov deliberately set out to oppose the gloomy pessimism of the 'Frankenstein-monsters'. He wanted to create a positive vision of technology.[1] Asimov wrote about robots: noble servants of humanity, programmed at the deepest level of their positronic brains to allow no harm to come to human beings. For Asimov, the story of technology was an optimistic story of human progress.

Asimov had a point. As I've lived through the rise of the world wide web and social media, I've seen and experienced the blessings they've brought to the world: access, knowledge, connection, and a voice for the otherwise voiceless. And yet, as I've used social media, I've also seen the addictive and traumatizing effects on myself and others. I've come to see that there's more of Frankenstein's monster in social media than I'd initially thought.[2]

Near the end of the twentieth century, media theorist Neil Postman wrote about technology's past, present, and future effects on society. His ideas still ring true. Postman argued that technology is always "both friend and enemy", "both a burden and a blessing".[3] Whenever we embrace a new technology, it brings unexpected harm. Behind the friendly robots, monsters always lurk. And as the twenty-first century rolls on, we're coming to see more clearly how this applies to one of our latest technologies: social media. In particular, we're seeing how social media cause significant problems for our relationship with truth.

A brief history of communication technology

But before we blame social media for all our problems, it's worth briefly getting some historical perspective. Over the centuries, many new communication technologies have been introduced. Each time, there have been both substantial benefits and significant disruptions. And each time, the new technology has affected our relationship with truth. As Neil Postman argues:

> New technologies change what we mean by 'knowing' and 'truth'; they alter those deeply embedded habits of thought which give to a culture its sense of what the world is like—a sense of what is the natural order of things, of what is reasonable, of what is necessary, of what is inevitable, of what is real.[4]

The introduction of the printing press in Europe was a great blessing. It led to enormous growth in access to information—including access to the life-giving words of the Bible. Yet the printing press also affected how we valued and engaged with truth. Since reading became a more personal experience, truth came to be understood more as an individual rather than a communal thing. This had mixed results. The rise of individual interpretation meant that people valued individual conscience and personal faith. Yet it also led to a fracturing of communities. It was a factor (among others) in the Thirty Years' War, one of the most terrible conflicts in European history.

The introduction of telecommunication technologies like the telegraph and telephone was also a great blessing. It enabled ideas and facts to be spread instantly. It allowed societies to be run more efficiently and safely. But it also affected what we valued when it came to truth. It meant we prized instant, up-to-date information over old ideas. The wisdom of elders and ancients was relegated to dry and dusty history. Old ideas were old news. What was truly true was what was new.

The invention of television brought societies together through shared stories. Yet it also changed our understanding of what mattered most when evaluating truth. As Postman comments, it moved us away from "the printed word with its emphasis on logic, sequence, history, exposition, objectivity, detachment, and discipline" to focus more on "imagery, narrative, presentness, simultaneity, intimacy, immediate gratification, and quick emotional response".[5] Again, there is good and bad in all of this.

The same dynamic is at work in social media. Social media bring great blessings of instant connectedness. But they also affect our relationship with truth.

Information overload

One issue with social media is information overload. The sheer volume of information bombarding us daily is too much for our human brains to process.[6] True and important facts easily get lost in the flood of data. It's not that people are always hiding the truth from us. Even when the truth is readily available online, we often don't have the time or ability to find it. There's just too much noise.

Enter the algorithms

Social media corporations offer us a technological solution to this information chaos. They conveniently filter the information for us, presenting us only with what their cleverly programmed algorithms have decided we want or need to see. This makes the technology feel like a faithful robotic servant, assisting our noble pursuit of truth and happiness. However, as journalist Johann Hari points out in his book *Stolen Focus*, there is a dark side to this constant filtering.[7]

The problem is that the algorithms don't care whether they present us with what is true. They are driven by the needs of the social media corporations and their shareholders. So what the algorithms choose to show us is ultimately determined by whatever will keep us tapping and scrolling and watching the ads. Programmers deliberately use the science of addiction to keep us hooked through countless tiny dopamine hits. The algorithms track and manipulate us so they can learn what to show us in future to keep our attention. This isn't a conspiracy theory; it's just the well-documented and inevitable result of the social media corporations' business models. Yet it's serious. It means truth is no longer a significant factor in what we see and hear.

Deliberate manipulation

Add to this the fact that other powerful corporate interests, criminal groups, and even nations on the opposite side of the world can cleverly use the power and reach of social media to manipulate what we see.

In late 2022, for example, the Chinese Communist Party was almost certainly behind coordinated attempts to overwhelm international reporting of lockdown protests in Chinese cities. Sophisticated spambot networks on non-Chinese social media platforms (primarily Twitter) hijacked relevant hashtags and flooded the streams with spam and pornography.[8]

Whenever we use social media, it's possible that we're being deliberately lied to. This makes the problem even worse. To fix this problem, social media companies offer a further technological solution: robotic 'fact-checking'. Yet this is a bandaid solution to a systemic problem. 'Fact-checking' doesn't fundamentally alter the corporate business model. It merely becomes yet another layer where manipulation of truth can take place. After all, why should

we trust the fact-checkers? How do we know that the social media corporations' 'facts' aren't biased to fit their own agenda?

The medium becomes the message

These issues are serious enough. Yet there is something even more significant going on when it comes to social media and truth. It's not simply that social media platforms make it harder for us to access or recognize the truth. When we consistently use social media, it can affect our very conception of truth itself. This is what media theorist Marshall McLuhan meant when he wrote "the medium is the message".[9] He meant that the way we receive information (the medium) isn't just a neutral channel for truth. The medium itself shapes how we value and approach truth itself.

Consider, by contrast, an older information technology: the book. How does a book present truth to you? Reading a book is like stopping to eat a multi-course meal. You need to slow down and focus. To read a book properly, you must immerse yourself in a story or an argument that develops from beginning to end, chapter after chapter. You need to take time to reflect, to take it all in, to enable your reasoning and judgement to work together with your emotions and intuitions to form your ideas and, if necessary, change your mind. The more you read books, the more you train yourself to think about truth in a 'bookish' way. You think about truth as a complex yet coherent whole. Truth is multifaceted and interconnected. Truth involves many smaller ideas or mini-stories building on each other and working together logically. Truth can sometimes impress your heart and mind so much that you willingly and consciously change how you think and feel. That's how you approach truth when you're immersed in the world of books.

By contrast, engaging with social media is like devouring a bag of mixed sweets. Social media platforms present information to us

in tiny, disconnected, easily digestible, bite-sized, image-saturated portions. The portions fight with each other to grab our attention. They interrupt our focus. They provide us with an endless series of little dopamine hits to keep us aroused. We don't need to stop to reflect on what we're consuming. In fact, we don't *want* to stop to reflect. It's easier to scroll and move on to get the next sugar hit. The endless stream bypasses our reasoning and judgement, going straight for our gut: our intuition and emotions. This trains our brains. The more we use social media, the more we tend to think about truth in this reactive, fast-paced, disconnected way. We can think about truth as more like a shifting join-the-dots picture that emerges from a kaleidoscope of unreflective reactions to individual pieces and images ...

"That's funny."

"How sad."

"Cute."

"She's authentic."

"Outrageous!"

"I hate people like that."

On and on it goes. Truth is about what we feel in our guts. It's a vibe. It doesn't need to hang together logically.

Social media and politics

This would all be perfectly fine if social media platforms were merely a form of entertainment. But they are far more than this. They have reached into other aspects of our lives. As we saw in the last chapter, a critical area where social media are having a huge effect is the realm of politics.

Of course, even before social media came along, intuition and group loyalty played a considerable role in our social and political judgements.[10] But social media massively amplify this effect. They

turn the herd instinct into something much harder to keep in check.

Why? Because the incredible interconnectedness of social media means we can be influenced—and influence each other—at a lightning pace, constantly bypassing individual reflection and critical judgement. The very nature of social media platforms makes us care more about simple causes and special interest groups (where it's easier to feel the instant feels) than the big picture of our society (where the reality is complex and tedious). Facts—especially complex facts that force us to think more than one thought at a time—are dull. Facts fall dead in the water. By contrast, raw emotions go viral.

Add to this the fact that algorithms filter our personal experiences to keep us hooked. They show each of us a different slice of the facts based on our individual vibe. So, without quite realizing it, we're all being reinforced in our private opinions rather than having the opportunity to be challenged by alternative views. In this way, the technology enormously amplifies polarized black-and-white thinking. It constantly creates situations where we instantly judge every person we encounter as either good or bad, depending on whether they say the right or wrong trigger words according to the particular causes we care about. The contrast is constantly turned up. Loyalty and hatred replicate and propagate through the system. There's no easy place to stand in between. The technology doesn't work that way.

What does this do to truth in politics? It means politicians who learn how to grab our attention and create simple emotional reactions—positive or negative—rise to the top, no matter whether what they say is true. Lies usually propagate far more quickly than facts because lies are simpler and juicier. As the saying goes, "A lie can travel halfway around the world while the truth is getting its boots on".[11]

That's why social media platforms are wide open to manipu-

lative practices like micro-targeting, fake news, and conspiracy theories. And that's just in the realm of politics. As we will see in future chapters, our relationship with social media also affects truth in many other aspects of our lives.

Future technology?

In this chapter, I've concentrated on only one kind of technology that affects our relationship with truth: social media. In the coming years, emerging technology will present us with further challenges. The rise of artificial intelligence (AI) and virtual reality (VR), for example, will undoubtedly create more revolutions in our relationship with truth. It's now a simple matter for an AI algorithm to manufacture an ultra-realistic image or audio recording. Deep-faked video material is becoming increasingly common. How will we be able to trust the evidence of our eyes and ears when we cannot know what is real and what is virtual?

Don't be naïve about technology

The point I'm making here is not that technology is always good, like Asimov's robots, or always bad, like Shelley's monster. The point is that we need to be aware of how much our use of technology affects our relationship with truth. Despite the advantages of social media, their impact is also a significant factor in our truth problem. We can't run away from our technology. But we must not be naïve about it.

Yet we'd also be naïve if we thought that social media (or any other technology) were to blame for all our truth problems. The technology is merely exploiting what's inside all of us. It's not just the monsters and the robots. It's us, too. That's why we need to go on to think about truth problems in other areas of our lives.