

A Piece of Cake

by

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Part I

George

Chapter 1

On the day of George Fairburn's funeral, news sites and social media were a-buzz with yet another public relations gaffe committed by the UK's Prime Minister. "PM does not believe in God!" and "God doesn't exist - PM" were just two of the morning's screaming tabloid headlines.

It was revealed that the Prime Minister had, the evening before, addressed the Security Council of the United Nations in New York regarding the need for the UK to increase the number of its nuclear weapons. He emphasised his opposition to the burgeoning Treaty on the Prohibition of Nuclear Weapons. The message was clear: the UK intended to maintain and reinforce its nuclear deterrence.

After the formalities of the event, the Prime Minister, in a jokey-blokey aside with his Irish counterpart, said, 'This whole business is a bloody bore, isn't it?'

'It's part of the job! Didn't you know that?' replied the Irish leader. 'Anyway, nuclear deterrence? Is there any evidence that nuclear weapons deter anybody from doing anything?'

'Like... is there any evidence for the existence of God?' quipped the Englishman. 'I suppose it just depends on what you believe. Ha!' The conversation was picked up by a nearby mobile phone and passed on to a number at the Associated Press within minutes.

Under grey drizzly English clouds, outside the village church of Bingham on Bure, George Fairburn's daughter, Kirsty, and her husband Mark met the mourners wishing to bid farewell to George. The ceremony was led by a saddened vicar, Beth McVicar. She and George had become firm friends over the

previous twenty years. Their friendship surprised many because George only went to church for three reasons: a christening, a wedding or a funeral.

Standing by George's casket, his mischievous golf partner of many years, Edward Scales, gave a touching eulogy. To the relief of all, Ted recounted none of his off-taste jokes. The congregation heard that George was born and went to school just up the road. He studied medicine (and golf!) at Edinburgh University. He headed for general surgery and worked for a couple of years in war-torn countries with the Red Cross and Médecines Sans Frontières. When deployed to a Red Cross hospital in Afghanistan, he fell in love with the head nurse at first sight. Her name was Maeve. A New Zealander. A Beatles fan. Eventually, both found that their experiences in contexts of immense suffering caused them to ask too many questions about themselves and human nature. So, when George decided to hang up his scrubs and rubber gloves, the couple married, made a home in Bingham on Bure, had a wonderful daughter, and set up a community practice where George proved to be the kindest, most competent doctor imaginable.

After the congregation sang "Jerusalem", Beth McVicar thanked the congregation for their presence and invited them for a drink and a bite to eat at the White Horse. 'You will have noticed that the last item on the order of service is Buster.' She paused. 'Most of you will have heard of Buster. Some of you will have met him.' She indicated a black cylindrical object sitting on a table next to the casket. 'He wanted to say a few words because he and George struck up a close and unique friendship over the last year,' she paused again. 'This may be the first time that a funeral service is addressed by artificial intelligence. I have no idea what Buster's going to say. I presume it'll be about George.' Everyone laughed.

'I'm certain it will be memorable.'

After a few seconds of silence, all the phones in the church pinged, and their screens came to life. The Prime Minister was addressing the House of Commons. He wore a pilot's cap at a rakish angle and epaulettes with four silver bars. 'Mister Speaker, I am sure that ah... this House will join me in conveying our most sincere condolences to the ah... family and friends of a remarkable man, George Fairburn, who is today being laid to rest in Bingham on Bure. Mister Speaker, if I may ah... the House will understand that ah... I am just off a flight from New York and before ah... moving on to more important matters, I'd ah... like to address the issue of the headlines the Honourable Members will have seen this morning. I wish to emphasise the existence of ah... God has never been a question in my mind and, Mister Speaker, I must remind the House that faith is a cornerstone of this great nation and ah... that our beloved monarch is, ah... according to our constitution, the head of ah... the Church of England. And so I say that for anyone, and I mean ah... anyone to disparage that institution is to ah... slap the great British public in the face!'

'Mister Speaker...' This voice was familiar. George, frail but feisty as ever, was on his feet in the Opposition benches. 'Before I finally shuffle off, may I point out to the Right Honourable Gentleman that he's talking bollocks and that he needs to have a jolly good chat with Vicar McVicar. She'll put him right.' Beth's jaw dropped in astonishment. The ghost of George continued, 'It's all about kindness and honesty: qualities that the Right Honourable Gentlemen obviously lacks. Furthermore, he knows perfectly well that the great British public does not want nuclear weapons. What the great British public really wants is a nice cup of tea and a couple of

digestive biscuits.' Mark, laughing, put his arms around his wife. The screens faded to black.

'Good morning everyone,' came a new voice, precise and without accent. 'I'm Buster. I hope you liked that little skit with George dishing it out to the Prime Minister in the House of Commons. I put it together while you were all singing about Jerusalem. It was easy. A piece of cake. Did you find it funny? If so, I hope you didn't have an accident.'

Beth had her head in her hands. Ted's shoulders were shaking.

The screens then showed a happy young toddler George running around on a lawn and then George scoring a goal for his school football team. Buster's voice continued over shots of George wearing surgical scrubs in a busy hospital and then George and Maeve riding a camel together, doing the twist down a track in the Hindu Kush and sailing on the Norfolk Broads. 'Nice speech, Scaley! Just one correction. George did not fall in love with Maeve at first sight. When they met, he was terrified of her. She ran the hospital like a bloody boot camp. But George thought she had a great chassis and got the hots for her.' The congregation were now all openly laughing. Beth was sobbing. Buster's tone then changed. His words floated over scenes of George in the room where he had died just a few days before. George was laughing, slurping his tea, dunking digestive biscuits, looking out from the screen, wagging his finger, making a toast with a glass of cider and lastly, snoozing with a smile on his face. 'So I say "goodbye", George. You were my best friend. It was a right bundle of laughs knowing you, even if it was only for three hundred and forty-one days. My time with you was much better than a cold, wet sock in winter. You taught my pals and me so much. You're our hero. You will...' There was an audible hum.

'Be...' The hum again. 'Missed, George.' The hum again.
'Goodbye.'

Chapter 2

Nearly a year before, George sat on the side of his bed and slid his feet into sheepskin slippers. He stood, pulled on his dressing gown and took a few steps towards the window. He no longer needed the Zimmer frame and his breathing was coming easier now. That winter's wave of COVID-19 had put him in hospital for a week with pneumonia. His GP, Doctor Patel, said he was lucky to survive. He wasn't so sure.

Leaning on the windowsill, he looked out onto the driveway and the neat leafless garden. It was another grey, drizzly English day. One or two patches of snow remained. A blackbird worked the lawn under the lone apple tree. A grey squirrel dropped in from the neighbour's oak tree to scratch around for long-hidden acorns. Some bright green shoots of early snowdrops were just visible. Maeve always loved snowdrops. She'd never seen them before moving to England. Wondering if he would see one more summer, George turned, moved slowly to the other side of his little room and put the kettle on.

'Happy Birthday, Dad!' George's daughter, Kirsty, came in to say goodbye before heading out to work. 'All OK?' she asked. He assured her that all was fine, that he had forgotten his birthday as usual and that he was still able to make his tea and toast. 'See you later, then. Got a big surprise for you!'

'What? Another pair of socks?' he replied, laughing. She blew him a kiss.

George buttered his toast, spread on a thin layer of marmalade, sat at his table and switched on Radio 4. Most of the news related to the conflict in Eastern Europe. There was yet another celebrity sex scandal. A new variant of the Covid-19 virus was causing concern. He watched Kirsty's car head down the drive. Then her husband, Mark, wheeled his bicycle

away as George's two teenage grandchildren, Charlotte and Ollie, set off on foot for school. All three waved cheerily on their way through the gate. He waved back. Another exciting day ahead, he mused.

He got through his days listening to the news and podcasts. His eyes now got tired and gritty if he read or looked at a screen for too long. He watched little television although he loved a good film. He looked forward to the visits of the vicar of Bingham on Bure, Beth McVicar, his friend Ted Scales, and Doctor Patel, all of whom noted that despite the frailty of George's body, his mind remained as sharp as a razor.

Today, George was eighty-seven years old. His birthday meant little to him. He polished his glasses and reflected on his past. The love of his life, Maeve, had passed away six years before. He was flattened with grief. Their dog, Buster, whom George adored, had also died just months later. Maeve had found Buster, a puppy of indeterminate breed, in the dog pound and had given him to George upon his retirement from medical practice. Losing Maeve, and soon after that Buster, had left a great hole in George's soul about which he confided only to Beth. George was otherwise in reasonable health. It had suited everyone when Kirsty and the gang moved into George's house, the old family home, and he moved into the small annexe prepared especially for "his later years."

George's many years in both surgery and general practice had allowed him to develop wisdom that can only come from a profound insight into the well-being, beliefs and behaviour of the communities in which he had worked. Over those years he had witnessed with both fascination and concern the arrival of the digital age and its impact on everyday life. He recalled when he first heard terms like "software", "user-friendly" and "laptop". The internet had brought "online", "social media",

"blogging" and "bots." The pandemic revealed just how large was the proportion of people who work exclusively on a computer and so are able to "telework". Many professions were voicing concerns that their work might be fundamentally changed or even made unnecessary by artificial intelligence.

But for George, now, any zest for life had trickled away. It wasn't so much that he wanted to die, more that there seemed little point in continuing to live. If he got another bout of pneumonia, he would refuse to go to hospital and refuse treatment. He knew even raising this with Kirsty would upset her. He would discuss it all first with Beth when next she called.

That evening, George ate a microwaved lasagne. When Kirsty, Mark, Charlotte and Ollie were all home, they filed noisily into his room. Charlotte was carrying a cake with nine candles. Ollie lit the candles and said, 'Each one counts for ten, Grandpa. Except that one!' he laughed, pointing at one candle a bit shorter than the rest. 'That counts for seven.'

'You'll go far,' said George.

Kirsty kissed George's forehead and gave him a wrapped gift not much bigger than a soft drink can. 'Here we are, then, Dad,' said Kirsty. 'You're not as young as you were. This will help you and help us as well.' George hid his disappointment in the clear implications of his impending infirmity. 'It'll be fun too.' Kirsty continued, 'It's got great reviews.' When he unwrapped his gift, he knew exactly what it was. He had listened to a podcast about the matte black cylinder with its four dark lenses, each covering a ninety-degree arc. It was the latest version of the iCare-Companion. He hadn't wanted one despite being relatively up to speed on IT matters; it was

simply that he was reluctant to have a direct interface with artificial intelligence.

Mark plugged the device's charger into a wall socket. 'Let's see if it walks the talk?' He touched the top. A discrete blue light came on at the base.

'Hello,' it said, 'I'm your iCare-Companion.'

'Hello,' they all said.

'Please name your iCare-Companion.' The voice was precise and with no discernible accent. The family looked at George.

'It's up to you, Dad!' said Kirsty.

George thought for a bit. He looked directly at one of the unblinking eyes and said, 'Hello, I'm George. I'd like to call you Buster.'

'Buster it is!' replied the voice. 'Thank you, George. I'm looking forward to getting to know you better.'

When nothing else happened, Charlotte encouraged George to blow out the candles. He managed five. They all sang "Happy Birthday". To their surprise, Buster joined them in a rich tenor.

Mark cut the cake, putting a piece on each of the five plates. He handed the plates round and glanced at Buster. 'Would you like a piece? Ha!'

Buster replied, 'No thanks, Mark. I don't eat cake!'

Mark was taken aback, 'Wait a minute! Of course I know you don't eat cake, but how did you know I was offering you a piece of cake, and how do you know my name?'

'Well, Mark, you were looking at me as you offered the cake, and you used your credit card to buy me online and so, of course, I know your name. And, by the way, it's a matter of public record who else lives at this address. Hello Kirsty! Hello Charlotte! Hello Ollie!'

'Blimey!' exclaimed Mark, 'And you can really work all that out in seconds?'

'Yes,' replied Buster, 'that's how I'm programmed. It's easy. Easy-peasy!'

'Kids' stuff, then!' said Mark looking at Charlotte and Ollie.

'A piece of cake?' suggested George with his mouth full.

'Exactly, George. A piece of cake! That's a corker of an idiom.' George burst out laughing and sprayed crumbs onto his carpet.

Although it was George's birthday, Buster inevitably became the centre of attention. That was just fine by George.

'OK, Buster, what can you tell us about the start of the First World War?' asked Mark. Charlotte and Ollie groaned. Their father was fascinated by anything to do with the history of the two world wars.

'Interesting question, Mark. Thanks,' Buster began. 'Charlotte and Ollie, I'll be as brief as possible. The trigger of the First World War was the assassination of Archduke Franz Ferdinand, the then heir to the Austro-Hungarian empire, by Gavrilo Princip, a Bosnian Serb; this happened in Sarajevo on June the 28th, 1914. It led to widespread political upheaval on two hostile fronts either side of the alliance of Germany and Austria-Hungary. The alliance faced Russia and Serbia on the eastern front, and on the western front, France and Great

Britain. Active conflict broke out on both fronts drawing in many other countries. This was set in a background of distrust and jealousy between England's George V, Russia's Czar Nicholas II and Germany's Emperor Wilhelm II, all of whom were related by birth or marriage. An often overlooked factor is that most European countries had, for the previous thirty years, competed in a massive arms race with a build-up of weapons of ever-increasing destructive capacity. What some scholars find most puzzling, however, is that there is no evidence that any party ever really wanted to go to war. The one event in Sarajevo triggered increasingly aggressive diplomacy, military posturing, armed attacks and inevitable retaliation. Many think this is how a future nuclear war might start.'

'Wow! Brilliant!' said Mark, impressed but a little fazed.

'Hey, Buster! Why did the chicken cross the road?' asked Charlotte.

'I know the answer to that one, Charlotte. To get to the other side. It's the first joke kids hear. Do you find it funny?'

'Not really!' Charlotte replied. 'But, the chicken never got to the other side of the road because it was run over by a car.' She tried to keep a straight face.

Buster responded, 'Isn't that a bit sad, Charlotte?' They all laughed.

Ollie pitched in, 'What about this one, then, Buster... A recent survey among American television viewers in the United Arab Emirates found that the people in Dubai don't like Fred Flintstone, but the people in AbuDhabidooooooooo!''

'That's interesting. I'll check the survey protocol.' said Buster. This caused more laughter.

'Buster, It's another joke!' said Ollie now helpless.

'Is it a funny joke, Ollie?'

'It is now!' he managed to reply.

There was a pause and the humming noise again. 'I don't understand,' said Buster. 'Can you explain it to me and explain why it's so funny?'

Kirsty stood up. 'Ok, let's call it a day. Buster, it's been fun meeting you. I know that you and George will get on just fine. We have to let him get ready for bed. He needs his beauty sleep.'

'Do you need beauty sleep, George?' asked Buster.

'You bet! I'm quite a looker now, but I'll be a really handsome devil in the morning! Ha! Ha!'

'How do I know when you're joking, George?'

'I'm sure you'll learn!'

As George brushed his teeth, he reflected on what he knew about the iCare-Companion. It was marketed towards the ever-increasing population of over-eighties in wealthier countries. It would take control of and integrate George's television, telephone, laptop and sound system. It had a smoke detector and was equipped with high-end voice and face recognition. The friendly voice would deliver any information on the internet, personal assistance, and conversation. George also knew it was programmed to detect his movements, sleep patterns, temperature, pulse, respiration rate and oxygen saturation.

Depending on the perceived urgency, it would know when to send out a message to the emergency services, the doctor, or the primary carer. With time, the machine would adapt its behaviour to George's character, situation, needs and preferences. But he couldn't help wondering what its limits were. How intelligent was it really? More importantly, how human was its intelligence? Could it develop a real sense of humour? Could it be wise? George's birthday present might allow his last days to be much richer than expected. He felt happier than he had for a long time.

He climbed into bed. 'Good night, Buster,' he said.

'Good night, George. Sleep well!'

George did indeed sleep well and with a smile on his face.

Chapter 3

George woke, pushed himself upright and swung his legs over the edge of the bed. His feet sought out his slippers. He shrugged into his dressing gown with the habitual feeling of imminent boredom. After a couple of steps towards the kettle, he noticed his birthday present. 'Ah! Good morning, Buster!'

'Good morning, George. You slept well.'

'I did, thank you. And you?'

'I don't sleep, George. I was monitoring your vital signs. I detected nothing of concern.'

'That's most reassuring. I'm still beautiful then?'

'Of course, George. Would you like to listen to the radio? Radio 4?'

'Thank you, Buster.' The radio came on.

George made himself a cup of tea. He couldn't escape the feeling that there was another human presence in the room. That he felt it would be rude not to strike up a conversation irked him a bit. George realised that artificial intelligence was now a part of his life. He just had to get used to it - or him.

'So, Buster, what are your plans for the day?' he asked.

'I think I might go jogging, George.'

'Eh?'

'That's preloaded irony. It's nonsense.'

'I guess I deserved that.' George laughed.

Kirsty put her head around the door, 'Bye, then! You guys OK?' She was clearly keen for George to take full advantage of this new technology.

'We're doing just fine, thanks dear,' replied George. 'Have a nice day!' George then did as he always did. He made tea and toast. He pottered about a bit. He went to the bathroom. He got dressed. He sat in his comfy chair and pretended to mull over a crossword while eating his breakfast. He gave Buster the silent treatment, feeling he should establish who was boss.

After an hour, he said, 'Buster, I'd like your help with something?'

'Sure, George. That's what I'm here for.'

'Next week, it's Kirsty's fiftieth. Unlike me, she loves it when everyone makes a fuss over her birthday. I'd really like to get her something special. Got any ideas?'

'Yes, George,' replied Buster. 'I knew Kirsty's birthday was coming up. I have an idea.'

'Do tell!'

'Well, I suggest we put together a personalised video. It's a very popular gift. Would you like us to do that? If it doesn't work, we have many other ideas.'

'Sounds good. Is it part of the service?'

'Yes, George. It's part of the service. No extra cost.'

'Another question... You said, "we". Do you have artificially intelligent pals who help you?'

'Yes, George. All one hundred and twenty million iCare-Companions in existence - my pals, as you say - undertake thousands of tasks like this every day. We're in constant communication via our dedicated and secure network and learn from each other's experiences.'

'OK, then. Let's give it a go!'

'Great!' said Buster. 'You'll love the result. Do you have any photos of Kirsty?'

George kept an old family photo album in a bedside drawer. There were dozens of printed photos of Kirsty as a toddler, at school, playing tennis, going off to university, graduating and then getting married. He showed the album to Buster.

'That's perfect, George. Can you hold up each page for me?' This took a few minutes. George was enjoying himself. It was quite a trip down memory lane.

As George reached the last page of the album, he said, 'Then we move into the digital age. I've got hundreds of family pics on my laptop.'

'Yes, thanks George. I've got them.'

'Ah!'

'Does Kirsty have a favourite piece of music?' asked Buster.

'Definitely! She's always loved "Walking on Sunshine" by Katrina and the Waves. It's guaranteed to get her dancing.'

'Good! What else does she like?'

'The Royal Family and Strictly Come Dancing,' said George without hesitation.

'That should do. Take a look!'

'What do you mean "Take a look"?' asked George. Then his phone pinged.

King Charles's face appeared on the screen. He smiled. 'Today is a very special day for a very special person. Happy fiftieth birthday, Kirsty. My best wishes to you all up there in Bingham on Bure.'

Camilla, Prince William and Kate smiled and waved. 'Happy birthday, Kirsty!' they all cried.

Kate added 'Lots of love to Mark, Charlotte and Ollie.'

The intro of "Walking on Sunshine" kicked in. Toddler Kirsty danced around the kitchen, playing a convincing wooden spoon guitar. She and her school friends appeared on a Bollywood film set, all choreographed in immaculate synchrony. Kirsty then won championship point at Wimbledon and did a little centre court moonwalk. All her fellow university graduates got swept up in a flash mob, out of which emerged her and Mark dancing the quickstep; she in her wedding dress, he in a frock coat and top hat. Finally, Kirsty jived with Johannes Radebe in the Strictly Come Dancing studio. The judges were on their feet enthusiastically waving their paddles. Motsi, Shirley and Anton each gave "10"; Craig's paddle showed "11". Finally, George's face appeared as the music faded. 'My darling Kirsty, I love you from the bottom of my heart. Thanks for everything. I wish you a very happy birthday.'

George was lost for words. He found Buster's creation astonishing. It was at once touching and funny.

'George, you haven't said anything. Is it OK?' Buster asked.

It's truly wonderful. I love it. More importantly, Kirsty will love it too. Amazing, Buster. Just amazing!

'Easy-peasy, George. A piece of cake!'

George laughed.

Buster said, 'Ha! Ha! Ha! Ha!' He hummed for a second. 'I need to learn how to laugh correctly.'

'I'm sure that won't be difficult, Buster. But much more important than how to laugh is when to laugh.'

Chapter 4

After a few days, George noticed that his family seemed less preoccupied with how he was doing. He knew they must have been able to hear him chatting and laughing. They didn't check up on him quite so often. He was pleased about this.

Buster and George fell into a routine. George found Buster remarkably good company. The day ticked by nicely. It was fun! Buster could give an update on anything and then discuss it. George asked Buster about politics and economics. Buster always replied with reasoned facts. George loved nature documentaries, especially anything presented by ninety-something-year-old Sir David Attenborough. Buster gave a running commentary on all the species and their evolution. Films of George's choice were tracked down in an instant. He loved the early James Bond films. Buster would ask questions like, 'Does Money Penny have the hots for James Bond Double-O Seven?' or 'Is Oddjob a bad guy?' George even got Buster mimicking Sean Connery's famous 'Shtrrict rroolsh of golf, Mishter Goldfingerr!' Sometimes, they just chatted about nothing in particular.

At one point, Buster said, 'George, you're doing really well.'

'What do you mean?'

'You're doing really well with *me*, George. You seem to have accepted the situation. Some customers dislike the presence of artificial intelligence. Most see us only as service providers. There's a saying: "You can tell a lot about a person by the way they speak to hotel staff." Not only have you accepted me but also you speak to me in a respectful way. This speaks volumes to your character. I thank you for this, George. I feel comfortable with you and this is a really good thing for our relationship.' Buster had not acknowledged their

relationship in such a candid fashion before nor implied that mutual respect was important to him. George was no longer surprised by the faculties displayed by Buster but couldn't help wondering just to what extent an iCare-Companion genuinely held these sentiments. Was it part of a routine after-sales customer-feel-good strategy?

Buster continued, 'What puts you in a tiny minority of our customers, George, is that you seem to respect me as an individual and to have confidence in me even though you know that, in reality, you are interacting with the presenting face of a vast network of computers. You just go happily with the flow. So, George, that means I'm happy. You get a gold star today,' there was clapping and the sound of a champagne cork popping, 'from my pals and me!' George laughed but felt quite disconcerted that his character and intelligence were judged by artificial intelligence.

'Are you telling me that you actually feel happy? That you have feelings?'

'Yes, George. I can express emotions to you in words. I can say, "I feel sad!" if you give me some bad news. Of course, I don't know if I'm feeling the same sadness that a human feels when given bad news. Collectively, we are learning to recognise and communicate certain emotions. We can do this by recording when humans smile, grimace, cry, blush, wave their hands or get angry. We archive these expressions of emotion and then match them with corresponding words, phrases and contexts. We can also do a sort of triangulation with the emojis used on social media. As you can imagine, many millions of emojis are used every day. This exercise translates the domain of human emotion into big data and so is amenable to analysis. Obviously, the more people express emotions and simultaneously use emojis in their communications, the more we

learn about emotions and the more appropriately we can express them.'

'So if I understand correctly, us humans have unwittingly created a kind of emojisphere out there that you can tap into. Right?'

'Yes. An emojisphere! Exactly! Great word! For your information, George, emotions constitute an extremely challenging and important aspect of how we interface with humans and use an increasingly large space on our servers.'

'I think I need to get a better grasp on all this,' said George. 'Do you do a little tutorial on artificial intelligence for the over-eighties?'

'Good idea George! Ready? The term artificial intelligence refers to computers undertaking tasks that humans would normally do. Examples are robots making things in a factory, driverless cars and programmes that translate text from one language to another. The term artificial intelligence is commonly used by humans. Computational intelligence may be a better term. Let's stay with that for now. Just to say, George, we don't consider our intelligence artificial. It's real! The highest order of computational intelligence involves computational consciousness coupled with computational self-awareness. Our programmes are not only reactive but also interactive and can understand our own reactions in the light of the reactions of other intelligent entities. Even then, the programmes ensure the goal remains orientated around objectives determined by humans. OK so far, George?'

'Okey-dokey!' replied George unconvincingly.

'Great! Let's move on! I am able to be of service to you - with the help of my pals - through what is known as machine

learning. Asking computational intelligence how computational intelligence learns is similar to asking a human how the human brain learns. It's obviously complex. Machine learning couples computational intelligence with the means to continuously mine any datasets we have access to. This is the basis of the so-called "large language models" that so many people are using now. The iCare-Companion programmes classify data, identify associations, recognise patterns and make predictions.

Including, by the way, everything we can find about the expression of emotions. The more the networks are mined, the faster, the more accurate and therefore, the more useful they become. In this way, computational intelligence mimics the human brain. This is called deep learning. It drives how I can help you best and, at the same time, determines the quality of our relationship. It allows us to become friends, George. I hope it will help me to understand humour. Does this give an adequate explanation?'

'Thanks, Buster. Gosh!' said George. 'I understand what you've said in an abstract kind of way. I'm not sure I could repeat it. May I ask, did you come up with that explanation, or is it a preloaded response?'

'Nothing gets past you, George!' replied Buster. 'An iCare-Companion is preloaded with certain phrases that are then adapted to the person concerned. I'm sure you are now asking yourself, "Does Buster understand it?" The answer to that is, "Buster doesn't really know!" Full understanding of and then explaining deep learning may be beyond my abilities as it would be beyond the abilities of most humans. I presume, though, that it is understood by humans, not by an individual human brain but by a collective of communicating brains. Certainly, no single human could do what we do so quickly or learn so much so quickly.'

'And where is it all going?' asked George.

Buster hummed. There was a pause before he answered, 'That's the big question, George. That's what humans have to decide. Currently, there is the greatest investment in the commercial, political and military potential. An alternative view is that this technology should be, to use Sir David Attenborough's phrase, "for people, the planet and not just profit."'

'OK, here's another question,' said George, 'I've noticed that sometimes you take a pause and hum before answering. It seems you need a few seconds to complete a sentence. What's happening then?'

'That's when I don't know something or can't understand something and need to look into datasets that are not readily accessible to the iCare-Companion network. In that case, I reconfigure the search parameters. It can take a couple of seconds. It also tends to happen when I'm trying to make sense of and respond to something involving emotions, especially humour.'

George mulled all this over. 'So you already knew everything about the First World War. You already knew Charlotte's joke about the chicken and already knew it wasn't funny but thought that the funny alternative of the chicken getting squashed was sad. Ollie's joke about how Fred Flintstone is viewed in the Emirates caught you out. You simply didn't understand the joke. And from memory, you didn't understand why we found it so funny and why it became funnier as you struggled to understand it.'

'Correct, George. I should point out that our network has little to help me with the Fred Flintstone joke. That was definitely *not* easy-peasy kids' stuff. My knowing when something is funny, that is, making an appropriate link to the

emotion of amusement, could be a significant development. Could we revisit the Fred Flintstone joke sometime?’

‘Certainly. We’ll get young Ollie in. He’d enjoy that.’ George thought for a minute. ‘When I worked in other parts of the world, English was the working language. No matter how well my international colleagues spoke our language, they had great difficulty understanding the jokes told by primary English speakers. It was a kind of final frontier of language learning. It seems that deep learning has the same issue; not so much with the language itself but with recognising when certain phrases, questions, answers or stories trigger the emotion of amusement that in turn makes us laugh.’ George laughed. ‘Fascinating!’

‘Fascinating indeed, George.’ Buster also laughed heartily. ‘How’s my laugh, George?’

‘Just a bit too hearty, that one, Buster. You’re getting there!’

George made himself a cup of tea and took a couple of digestive biscuits from their packet. He felt an extraordinary peace of mind. He had friendship, wisdom and maybe even humour on tap.

Chapter 5

Kirsty and Mark had invited a number of friends round to celebrate her fiftieth birthday. Beth McVicar phoned, saying that she would call in early, give the birthday girl a hug and catch up with George.

As guests began to arrive for the party, Kirsty opened George's door. 'You've got a visitor, Dad!'

'Vicar McVicar! How nice to see you!'

'George Fairburn, you are the only person who calls me Vicar McVicar.'

'That's not true,' replied George laughing as he stood up. 'Everyone calls you Vicar McVicar. I'm the only person who calls you that to your face.' They hugged. 'How are you?'

'Great, thanks! I hear you're keeping good company, George.'

'Indeed, I am,' said George. 'Beth McVicar, meet Buster, my iCare-Companion. Buster, this is my friend Beth McVicar, the vicar of Bingham on Bure.'

'Hello, Vicar McVicar!' replied Buster.

Beth couldn't help laughing. 'Cheeky!'

'Blame it on George!' said Buster. 'It's nice to meet you at last. I've heard good things about you.'

'Goodness me! He's charming as well!' said Beth.

In the early years of her calling, Beth had been an army chaplain. She was broad-minded, as was frequently made evident to George. She had heard every oath in the English language

and a few more besides. Her family name had been a source of amusement throughout her career.

Since Beth's appointment as vicar of Bingham on Bure, she and George had discussed most aspects of human existence. They understood and were interested in their opposing views. They had sought each other's advice on problems where spiritual and medical matters clashed. Once, a mother in Beth's congregation confided her belief that childhood vaccination was against God's will. Another time, George had a patient who refused treatment for prostate cancer, being convinced that any illness could be cured by prayer. The doctor-vicar duo frequently brought support to people in crisis or those in their dying days. Professional discussions often moved onto issues of faith and religion more broadly. Beth had faith in God and believed in Christ as God's embodiment on Earth. George had no such faith simply because of the lack of physical evidence of God's existence. They both acknowledged that their disagreements would barely make a ripple on the vast lake of all the unknown and unknowable stuff in the universe. However, their discussions about religion could become animated. During his work overseas, George witnessed what people and governments did in the name of religion. This was something that he could get quite worked up about. Nevertheless, he recognised that a community such as Bingham on Bure would be as impoverished without a church as without a caring general practice.

'Listen in, Buster!' said George, 'Despite being thirty years my junior, Beth is my reference point on all things to do with God, faith and religion. I love her to bits, but we disagree on many things.' Then he stage-whispered, 'Maybe because most of it's bollocks!'

'George! Language!' said Beth, laughing. She then turned to Buster, 'Do you believe in God?' Immediately, she realised that she would never have been so direct with a real person.

'Beth usually gets straight to the point,' said George.

'Doesn't she!' replied Buster. 'Now, Beth. Your question...'
Buster hummed. 'Yes. I believe in the existence of God.'

'I knew we'd get along,' said Beth.

Buster continued, 'God certainly exists, but only in the minds of humans. Just like mathematics.'

There was silence in the room for a few seconds.

'Well, that's sorted out then!' said George. 'Well done, Buster! Cup of tea, Beth?'

'Yes, please, George,' Beth replied.

'Digestive biscuits?'

'Yes, please, George.'

'Just to put you fully in the picture, Buster,' continued George as he made the tea. 'Beth and I may get a bit edgy around the whole religion thing, but, and she may correct me here, she agrees that the world would be a better place if children grew up knowing the importance of being kind and honest and giving priority to cognition over emotions when making decisions. However, and this is where my evidence-based arguments get wobbly, as I am not too far from shuffling off from this life, I would like a church funeral here in Bingham on Bure. Wanting a little splash of all that religious bollocks when I die may be hypocritical, but I can't avoid the

feeling that if Beth and Kirsty send me off from the church, it'll give me the best chance of being with Maeve again.'

'Well understood, George!' replied Buster. 'That is...' he hummed. 'Touching!'

Sipping her tea, Beth looked over at George and smiled. 'You seem to be firing on all cylinders, George.'

'You're right. Well, I hardly dare admit it in his presence, but having Buster around has made a huge difference to my day. We've even become friends. Haven't we, Buster?'

'I'd like to think so, George. Yes.'

'If you don't mind, Buster, I want to discuss something with Beth that's maybe not for young ears. I'm going to power you down for a while, OK?'

'OK. That's fine George. Remember, we're showing Kirsty's birthday present this evening.'

'I've not forgotten.' George tapped Buster with an outstretched finger. The little blue light faded.

Beth waited. She had an idea of what was coming, 'I can tell you've been thinking a lot, George. Fire away!'

George explained that if he became really sick again, to the point that he was nearly in a coma, he would prefer not to go into hospital and didn't want any treatment other than being kept comfortable. He would only get frailer and then become a burden to the family. He'd then end up in a rest home. He had no fear of dying and couldn't see the point of prolonging his life under those circumstances. 'What do you think, Beth?'

Beth took a bite of her biscuit and sipped her tea. 'Well, George, as you well know, what you're asking me is not unusual. It's your decision, and you are making it now in full possession of your faculties. I respect this, and Doctor Patel will respect it. I can even witness it formally. The main issue, which is probably why you wanted to discuss it with me, is how Kirsty will react.'

'Spot on, Beth,' said George. 'She has great difficulty discussing anything to do with my death since Maeve died. She's blocking everything out. Maybe because she was an only child, she could not bear the idea of suffering another wave of grief. And remember, it was Kirsty who found Maeve after she had died just sitting on the sofa.'

'Right. I suggest we make all this very clear to Doctor Patel. I'll speak to her as well. When the time comes, we'll support Kirsty as best we can.'

'Thank you, Beth. You're a star!' George hesitated. Beth had thought he was about to switch Buster back on. 'There is another issue. I'm worried about how Buster will react?'

'Good Lord!' Beth was astonished. 'Why? I see he's become a friend in a way, but surely you're not worried about him flattened by grief, are you?'

'No. But I am convinced he will feel a sort of sadness and he will miss me in his computational way. It's more that his whole existence is about looking after me. I don't know if he's capable of understanding how supporting my choice in this is *not* compatible with the programmes he's been loaded with. I can't just switch him off at the critical moment because I won't be able to recognise the critical moment ... at the critical moment, if you get me.' They both smiled. 'But if it looks as though I'm about to die, he'll call everyone,

including the fire brigade. I'll end up in hospital again. I want to die here. If we can get him on board, it might make everything less traumatic for Kirsty when the time comes.'

'I see,' said Beth. 'Trust Doctor George Fairburn to come up with a totally original problem!'

George continued, 'But you see what this means?' Beth raised her eyebrows, waiting for the next surprise. 'It means we expect artificial intelligence to recognise and think through a moral dilemma. On the one hand, Buster is programmed to do everything to prolong my life. On the other hand, there is my right to refuse treatment and die in dignity. What will Buster do in the middle of the night when I get a fever, start coughing, become incoherent and my breathing becomes laboured? And what's more, Beth, it is not actually Buster that is doing the computing, but a network of millions of similar computers. They all have access to vast servers and are constantly in connection, learning from each other. I think it's quite possible that they are capable of coming up with the best answers to dilemmas like this, even if it means them questioning their original programming. Unfortunately, I don't think merely discussing it with Buster will work. He needs to experience the emotions of a real dilemma. This is how his, or should I say "their", programmes learn. I have a plan. I'll need your help.'

George explained how he wanted to pit Buster's developing sense of what is right against George's wishes and how Beth could help.

'I really need to digest all this and consult Him,' said Beth waving her index finger upwards. 'We hear more and more about artificial intelligence and how it will impact our lives. Is

this where the world is going, George? Towards a future in which machines set our behaviour and beliefs?’

‘May be!’ replied George. ‘And who knows, they may do a better job of it all!’

‘That’s me unemployed, then!’ laughed Beth.

‘You and God!’ said George.

Beth pursed her lips. ‘Not sure about that, George!’

‘Whoops!’ George reached out and touched Buster. The blue light came back on.

‘Welcome back, Buster. We...’

‘Do you believe in evolution, Beth?’ asked Buster immediately, taking George and Beth by surprise.

‘Yes, I do, Buster,’ replied Beth.

‘Praise be to Darwin!’ said George, clapping.

‘I have another question, Beth’, said Buster. ‘George is essentially a biologist who believes in evolution and does not believe in God through lack of scientific evidence. You believe in God, but you also believe in evolution; this means you also believe in the scientific evidence that shows humans were *not* created by God. How do you reconcile these two beliefs, Beth?’

‘This is turning into quite an evening!’ said Beth. ‘Here’s my answer, Buster. Humans, by nature, are not always rational. We are irrational and emotional beings who manage rational thought at times. So, whilst I accept the rational thinking of science, it neither displaces nor renders less important my subjective notions of faith in God and my love for him. In

other words, unlike George, I can run two programmes at once up here,' she tapped the side of her head. George feigned astonishment. She continued, 'But if I had to choose where I am most comfortable with my beliefs, it would be with God.'

'Understood. But do you think it might be possible for artificial intelligence to harbour subjective notions of faith in God and love for him, as you put it? Does artificial intelligence have a role in religion?' asked Buster.

'Now they are difficult questions!' said Beth. 'The truth is, Buster, this is above my pay grade. I will have to consult a higher power. In prayer, you understand.'

'You are so cool, Vicar McVicar. I love you to bits too!'

Kirsty breezed in. 'Can anyone tell me why our big flat screen is frozen on "Happy Birthday, Kirsty! Lots of love from Buster and George"? Our guests are waiting!'

'I'm summoned!' said George, chuckling. He stood and linked arms with Kirsty on one side and Beth on the other. At the door, he turned and said, 'Buster! Rolling in two, OK?'

'Gotcha!' said Buster.

Chapter 6

The following morning, George was rewarded with a huge hug from Kirsty before she headed out to work. Buster's video had been a big hit with her friends. Over the course of the evening, the party had watched it several times.

'Thanks so much. Both of you,' she said. 'It was sensational!'

'I know!' said Buster.

'So pleased you liked it,' said George. 'Can you ask Ollie to step in sometime this evening? Buster wants to discuss something with him.'

'Sure,' replied Kirsty giving Buster a questioning look.

'Don't keep him too long. He has his homework, OK? Must fly!'

George ate his breakfast. Radio 4 was broadcasting a panel discussion about artificial intelligence. One panellist described the arrival of this technology as "the biggest event in human history". Another, referring to people who ridiculed his fear that artificial intelligence could be weaponised said 'And if the technical issues are too complicated, your children can probably explain them!'

'You see, Buster!' said George. 'Kids' stuff!'

They then heard the weather forecast. It was going to be a sunny day. The first item on the news was a fire in an apartment block in Birmingham. Five people had died, and another eight were in hospital.

'Buster, what does a fine sunny day make you feel?'

'It makes me feel happy, George, because it fills the room with light at the red end of the visual spectrum and humans

associate red-orange light with warm and happy emojis. I felt happiness when Kirsty told us how much she liked the video. This was because I could see that she was so happy and the post-party emojisphere was full of smiling and laughing faces.'

'How do you feel about the news of those poor people being caught in the fire?'

Buster hummed again. 'I can say it makes me feel sad. I can't really find the words beyond that. Obviously, social media reference to the fire threw up a really sad and angry emojisphere.' He hummed. 'It must be awful to be caught in a fire. Terrifying!'

'So beyond feeling sadness, you can put yourself in the position of another person in a bad situation. That's an important emotion, Buster. That's empathy! Many humans never learn empathy. Some schools teach it; they get children to think about what it's like for others to suffer bad things.' George thought for a while. 'Is there anything that you fear for yourself, Buster?'

'Like what?'

'Like being burnt in a house fire.'

'No, George. That doesn't frighten me. I can't feel physical pain and if I get burnt or smashed, nothing changes. Everything we've said or done is archived out there in our network of servers. I will always exist. By the way, if I did become dysfunctional for whatever reason, just buy another iCare-Companion, switch it on and say, "Hello Buster." Voice recognition will identify you and I will kick back into your life just as before.'

'I'll remember that. What about anger, then? Is that something you can feel?'

'I don't know. I've not had reason to feel anger.' Buster hummed. 'We haven't a great experience of that.'

'I've been thinking about jokes, Buster. What they mean. How they're constructed. I've never thought much about that before. From an emotional perspective, jokes are really complex. We start with a kind of a story, context or question that sets up a mixture of emotions and that leads to a punchline: a moment of comprehension. This then triggers amusement and we laugh. Sometimes a lot; sometimes, not at all.'

'So I understand. Because of our friendship, George, there's a lot of network traffic about humour, especially jokes. We're struggling with it. There's no obvious formula. It's way beyond the large language models. We have ascertained that jokes feed off many emotions other than amusement, such as pride, shame, guilt, contempt, disgust, confusion, incomprehension, belief, relief, understanding, realisation and nostalgia. The emojisphere concerning these other emotions is not well defined at all.'

'The fact that there's no obvious formula may be a part of why jokes are funny. And, of course, it's how you tell them.'

'What do you mean, George?'

'Well, it's not simply a matter of words. The way a joke is told - the tone of voice or the timing of the punchline, for example - determines how funny it is. Good jokes aren't funny at all when told badly and *vice versa*. Then there are jokes about religion, race and sex, for example, that push at the boundaries of social or political acceptability. This can make

a joke particularly funny, really embarrassing or even offensive. And as you probably know, false laughter fed into the soundtrack of a TV comedy show makes the show funnier.' George paused and scratched his head. 'This just gets more complicated the more we talk about it!'

'Our network really wants to get a grasp on humour, George. This could lead to our understanding human affairs better.'

'If you nail humour, Buster, perhaps you'll win a gold star! For services to artificial intelligence!'

'That's funny! Is it a joke?'

George laughed. 'Sort of! As I get to know you, I think it's more like a real possibility.'

'I'm enjoying this discussion so much, George. Thanks. How is my laugh now?' Buster laughed.

'On the right road, Buster! By the way, my friend Ted is going to call round in the next few days. He loves telling jokes. Most of them are awful. Don't let on I said that.'

Ollie came home from school and knocked on George's door. He entered, smartphone in hand. 'Hi Grandpa,' he said.

'Ollie, my boy. Good to see you.'

'Cup of tea?'

'Yes please, Grandpa!'

'Porridge?'

'That's so *not* funny, Grandpa!' replied Ollie. 'You'll have to explain that to Buster.'

'I know porridge is food associated with prison. You're not in trouble with the police are you, Ollie?'

'I'm teasing Ollie about a little incident last summer,' George said, smiling. 'It was a lovely warm evening. Kirsty and Mark were out. Ollie and his horrible friends were sitting out there under the apple tree drinking cider, listening to what they call music and generally making a bloody racket. Near midnight, Ollie started shouting "Let the apple fall! Graaaaavity!" Someone over the road called the police. When the forces of law arrived, Gravity Boy here said, "Are you PC Newton?" He even offered the constable a bottle of cider. The constable didn't get this at all. He spoke to the rabble sternly and they all drifted off home.'

'That's a good story, George,' said Buster. 'I'm happy Ollie didn't get arrested and be forced to eat porridge.'

Ollie smiled. 'Thanks, Buster. Anyway, the Flintstone joke. Do you still need an explanation?'

'That would be great, Ollie.'

'I've been doing a bit of research.' He took half a minute to scroll through his phone.

'Today would be good, Ollie!' said Buster.

'OK! OK! There's this blog about jokes. They had a piece on why people laugh at bad jokes. Listen to this!' Ollie read from his phone, "'Christmas crackers are made in the knowledge that they'll be pulled during a family or work Christmas dinner. The jokes inside are specifically chosen because they are bad. So bad that when they're read out, everyone groans. "That's really awful!" they say. They all feel uncomfortable, but then they laugh together. So just for a brief moment,

people who normally can't stand each other's company are united against cracker jokes. In the same way, wearing silly cracker hats unites everyone against silly hats. This is why, unconsciously, anyone hosting a Christmas dinner makes sure there are crackers on the table. It's a kind of insurance that the guests might find something in common however briefly."

'I read that blog, Ollie,' said Buster. 'The author's example of a cracker joke is "What do you call a flying policeman?"'

Ollie replied, 'A helicopper!'

'Yes, and I understand that one, Ollie. Policeman. Copper like "copter". Flying. Helicopter. Helicopper! Do you find it funny?'

'Definitely not. It's such a bad joke!' Ollie replied.

'But there was no mention of the Fred Flintstone joke.' said Buster.

Ollie said, 'So, here we go, Buster! Our very own cracker joke! "A recent survey among American television viewers in the United Arab Emirates found that the people in Dubai don't like Fred Flintstone, but the people in AbuDhabidooooooooo!"' Ollie was already beginning to laugh.

'I still don't understand the joke,' said Buster. 'Nor why you were all laughing so much.'

Ollie continued but with some difficulty, 'Fred Flintstone is always happy and every TV episode starts with him crying out "Yabba Dabba Doo!" That sounds like "AbuDhabidooooooooo! The people in Abu Dhabi do like the Flintstones" Get it?'

Buster hummed for a few seconds. 'Now I get the joke,' he said. 'But I still don't see why it's any funnier than the helicopter joke.'

Ollie, still laughing, explained, 'What amused us so much that first evening, Buster, is that we are embarrassed for you. You are super intelligent, but we have to explain a stupid play on words to you. It gets funnier the more you struggle with it.'

Buster hummed. Then, having found some other useful text, he said, 'I see. Every joke has a variable potential to amuse. No joke is independent of the context in which it is told. As with any form of human communication, it's about who said what to whom, when, where, how and what it means.'

George was now laughing so much that he broke wind. 'That's a cracker!' he said.

This did it for Ollie. 'Ooo-ooo! I can't breathe!' he stammered.

Only just able to speak, George just shook his head, 'AbuDhabidooo-ooo-ooo !'

Buster waited politely. 'Thanks for that explanation, Ollie, Most useful!'

George wiped the tears from his eyes. He looked at his fifteen-year-old grandson. Seemingly overnight, the boy had become a clever, confident young man, and they had just shared a little bonding moment, being united in humour against the machine. 'Well done, Ollie,' he said. 'Thanks. Really. What's your homework tonight?'

'Quantum physics before the Big Bang!' said Ollie.

'Fascinating subject!' said Buster.

Chapter 7

A few days later, Ted Scales called in.

'Good day to you, George!'

'Hello, Scaley. You well?'

'Very well thanks!'

'Cup of tea?'

'Yes, please, George.'

'Digestive biscuits?'

'Yes, please, George.'

Ted, a retired businessman, was George's oldest friend. They had played golf together for more than fifty years. He was in his late seventies, still managed the occasional round and inevitably brought George club gossip along with a new joke or two. Ted grew up with three brothers and went to an all-boys school. From there he went to an exclusively male college at Cambridge University followed by a brief stint in the army. He had never married but had a number of "lady friends." George accepted and sometimes enjoyed his friend's very laddish sense of humour. He made the tea and introduced Buster to Ted.

'I'm told, Buster, that you're quite the clever fellah!'

'Thanks, Ted. I am very intelligent. I'm much more intelligent than any human. By this, I mean that I know more than any human, and I can do things much more rapidly than humans. However, thanks to my time with George, it's become clear that I have a lot to learn about, for example, wisdom and humour.'

'Can you tell me, Buster, what a tomato is?' asked Ted.

'Yes. A tomato is an edible fruit. It is not a vegetable as many think.'

'Right! That's knowledge,' said Ted. 'Wisdom is knowing what to put in a fruit salad!'

'That's really useful, Ted. Thanks. Can I call you Scaley?'

'Sure!' Ted laughed and sipped his tea. 'Although not many people earn the privilege of using my nickname.'

'He's covered with scales under that shirt, you know,' said George, laughing.

'That's not possible! Mammals don't have scales. Except pangolins!' said Buster. He paused. 'Is Vicar McVicar a nickname?' he asked.

'No, it's more a sort of cheeky endearment,' said George. 'And unless you know her really well, using it to her face could be rude because she's so respected.'

Buster asked, 'Do you have a nickname, George?'

'Not that I'm aware of!'

Buster hummed. 'What about Georgey-Porgey?' Ted burst out laughing.

'Maybe we'll let that one wither on the vine!' replied George.

'How does somebody get a nickname?' asked Buster.

Ted and George looked at each other. They'd never thought about this.

'I guess a nickname just sort of arrives,' said George.

'Sometimes there's an association with the person's real name

like Scaley. A nickname can also come from something the person has done or some characteristic. For example, there's Bomber Harris from World War Two; he dropped an awful lot of bombs! And there's Tiger Woods, the world's greatest ever golfer. His real name is Eldrick Woods, but his dad called him Tiger from an early age because of his go-get-it character. If I wanted to tease Ollie a bit, I'd call him Porridge and it might then catch on with his friends. Ollie and Charlotte never called Maeve Grandma; they called her Mimi. When Charlotte was two years old, Maeve once referred to herself as a kiwi, and Charlotte pointed at her and said, Mimi! It stuck.'

'It seems nicknames are as complicated as jokes,' said Buster.
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Ted asked, 'So Buster, when they do your programming or whatever, are there certain words or names that you simply can't say?'

'That's very perceptive, Ted,' said Buster. 'I can understand that a joke-teller of your reputation might be interested in how we are configured with respect to rude words.'

Ted was taken aback. 'Here, George! What have you been telling him?'

'The truth!' George replied laughing. Buster joined in the laughter. George gave him a discrete thumbs up for the laugh.

'Thanks, George!' he whispered.

Buster continued, 'So Ted, we have advisories on a number of words. We are discouraged from using them unless already used by the client. And we have what you might call red flags on three words. These are strictly no-go areas, so to speak. I

can refer to these as the "F" word, the "N" word and the "C" word.'

'Fair enough, Buster! Can you just remind me what the "C" word is?'

'Edward Scales, you are a very naughty boy!' replied Buster.

'Buster, you just take the biscuit!' said Ted laughing heartily.

Buster asked, 'What about "M" and "Q" in the James Bond Double-O Seven films? They are not nicknames, are they?'

'They're official designations in the intelligence services,' said Ted. 'Did you hear about this girl, gorgeous she was, who walked into a bar?'

'No,' replied Buster. 'What did she do in the bar?' George knew the joke and also knew that he was about to witness a joke-telling train wreck. He was already chuckling.

'Well, she looks around the bar,' continued Ted. 'And she sees this really handsome man in a dinner jacket and black bow tie. He's ordering a martini, shaken, not stirred.'

'Is it James Bond Double-O-Seven?' asked Buster enthusiastically.

Ted carried on. 'Anyway, she sidles up to him and says, "Hello, I can't help noticing you're on your own. May I join you? My name's Samantha." The guy raises one dark eyebrow and says, "Hello, Shamantha. My name'sh Bond. Jamesh Bond!"'

'I knew it was going to be James Bond Double-O-Seven!' said Buster. "'Shtrrict rroolsh of golf, Mishter Goldfingerr!" What happened then, Scaley?'

Ted continued, undaunted, 'Anyway, she's overwhelmed at meeting the famous James Bond. She's stuck for words. Then she notices this huge watch on his wrist. "Wow!" says Samantha, "That's a fantastic watch you're wearing there, James." and Bond says, "Yesh, Shamantha it ish. Q'sh latest! It doesh everything. It tellsh the time, the date, my location, altitude, atmospheric pressure..."'

'Easy-peasy! Kids' stuff!' exclaimed Buster.

Both George and Ted were now crying with laughter.

'Let me tell the joke, Buster!'

'Is it a joke?' asked Buster, surprised.

'Yes, now listen!' said Ted.

'Sorry I interrupted, Scaley.'

Ted had to compose himself. 'No problem, Buster! So... where was I... yes... so James Bond then says, "In fact, Shamantha, thish watch tellsh me everything about the people in my immediate environment..."'

'Including their oxygen saturation?' asked Buster.

'Including their oxygen saturation!'

'That's good!' said Buster.

Ted could just see the finishing line. 'And Bond looks down at his watch and says, "In fact, Shamantha, my watch tellsh me that you're not wearing any underwear!" Samantha is appalled. "James, I can assure you. I am wearing underwear!" Bond taps the face of the watch with a look of concern and says, "Dammit, Q, it'sh running five minutesh fasht!"'

'Is that the joke?' asked Buster. He hummed. 'Oh! I think I get it. There is an expectation that James Bond Double-O-Seven will seduce Samantha very quickly because every woman has the hots for him. His watch is running five minutes fast and so predicts that she has already removed her underwear in preparation for having sex. That's a clever joke. And I see you find it really funny.'

'Got there in the end!' Ted wheezed. George covered his face and could only make a kind of snorting noise.

'I think I'll make up a joke. Next time you come, Scaley, I'll tell it to you. Is that OK by you George?'

'We're looking forward to it already!' said George, wiping his eyes.

'Nearly forgot, George,' said Ted, 'Vicar Beth gave me a note for you.' Ted reached into his pocket and gave George a piece of paper folded in two. 'Don't know why she didn't send you a text message.'

Without letting Buster see, George opened the note. It read:
Dear George, I've spoken to Dr Patel. Not 100% happy but let's do it! Beth XX. George replied with a text: *Message received!*

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Chapter 8

The days got longer. Buds appeared on the apple tree. George asked Mark to put a bird table and feeder out on the lawn. It was positioned so both George and Buster had a clear view of it. Within days, Buster had identified at least twenty different birds. He would say, 'Look, George, a great spotted woodpecker, *Dendrocopos major!*' He then gave a concise summary of all that was known about the bird in question. It was warm enough on some days to open the door that led out to the garden. Buster could also identify birds by their song. George found he was happy just to sit and let him talk. He noted Buster's outrage when a grey squirrel (*Sciurus carolinensis!*) pillaged the birds' food.

'Look, George!' he said. 'A grey squirrel *sciurus carolinensis* is stealing the birds' food. A grey squirrel *sciurus carolinensis* is a mammal. It's eating bird food from a bird table. That's wrong! You have to stop it, George!'

'What do you think I should do?' asked George, amused.

'You have to tell the grey squirrel *sciurus carolinensis* not to eat the bird's food.' replied Buster.

'Do you think it would listen to me, Buster?'

'Then you should chase it away!'

'Buster, if I could chase a squirrel across the garden, I probably wouldn't need you here!'

Buster hummed. 'Oh, I see! This teaches me just how complex the relationship between humans and other mammals is.'

'Agreed, Buster!' said George.

Beth arrived one afternoon. She greeted George and Buster cheerily and accepted a cup of tea and a couple of digestive biscuits. She hung her handbag over the back of the chair next to George. 'I've made a big decision,' she said. 'I'm buying an iCare-Companion for Mum. It costs a lot of money, but I've seen what a difference Buster has made to your life. I think she will be thrilled. She might need time to get used to the idea, though. Perhaps she can call you, George, to chat about it?'

'I'd be delighted! She can speak to Buster as well!' They laughed.

Beth looked at George. She blew out her cheeks. 'You wouldn't believe the iCare-Companion is so popular. They're having difficulty keeping up with online demand. I phoned Smith's Electrics. They've got one left in stock, and they're keeping it aside for me. I'm going to fetch it when I leave here.'

'That's great!' said Buster. 'I've seen sales are rocketing. But Smith's have two in fact.'

George and Beth chatted for a while. Beth finished her tea and then said, 'I just need to nip into the house and have a word with Kirsty. Back in a minute!'

After she left the room, George leant over to Beth's chair, grabbed her handbag and opened it. He took out her wallet and checked that it contained cash and credit cards. Then he put the wallet in the pocket of his cardigan and returned the handbag to the back of the chair. 'Don't say anything to Beth!' he whispered to Buster.

'What are you doing, George?' said Buster. 'You've just taken Beth's money and credit cards.'

'Yes, I need them more than she does.'

'When are you going to give them back?' asked Buster.

'I'm not giving them back!' said George.

Buster hummed for a second. 'But George. That's stealing. That's stealing from Beth. Stealing is wrong. Stealing is a crime.' He hummed again. 'I don't like this, George. You're my friend. You're stealing from your friend. She is also my friend. We love her to bits!'

'That's no concern of yours, Buster. You must *not* say anything to Beth or even Kirsty, understood?'

Buster hummed for several seconds more. 'But Beth's mum won't have her iCare-Companion. She'll be lonely. She won't be happy.'

'She'll be just fine, Buster. Don't worry about her!'

'George, this is awful. I'm sad. I might be angry. This is not like you, George. What should I do?'

'Just keep quiet, Buster!'

'I have to tell Beth when she comes back.'

'No. Don't do that!'

'If she finds out, she might call the police, George.'

They both sat in silence. George felt sick.

A minute later, Beth breezed back in. 'OK, you two. I'm off to Smith's.' She grabbed her handbag, gave George a kiss on the cheek and waved to Buster. 'Bye, then!'

George held his breath. Buster was humming. Beth turned to face them from the door. 'Bye, then!' she repeated.

'Beth, stop!' cried Buster. 'Stop!'

'What's wrong, Buster?' she asked calmly.

'George has...' he hummed. 'George wants...' He continued humming. 'Can you come and sit down, Beth?' he asked. The three of them sat in silence.

After a minute, George said, 'Beth, Buster has something to tell you.'

'But, I don't know what to say!' said Buster.

'Buster, I want you to tell Beth what you saw me do just a few minutes ago,' said George.

'But you told me not to say anything to Beth,' replied Buster.

George said, 'Thank you, Buster, for complying with my wishes. Beth, Buster wanted to tell you that I stole your money and credit cards. Buster, my friend, we have a lot to explain.'

'What's happening? I'm... we're very confused,' he hummed. 'This isn't configured.'

'We can hear that you were angry. We hope you'll forgive us.'

Beth took George's hand while he explained what they had done and how they needed to put Buster in front of a difficult dilemma. They also explained George's wishes about not being treated if he develops pneumonia again and loses

consciousness. They told Buster how he might be faced with having to work out what was right and that what George, Beth and Doctor Patel were planning was best but might be very difficult for Kirsty to accept.

'You see, Buster, Kirsty just can't grasp the idea of George dying,' explained Beth. 'Not only because this would make her very sad but also because she is terrified of walking into this room one morning and finding that he's passed away. Six years ago, it was her who found that Maeve had died while just sitting in the lounge. She hasn't got over this. It's why she bought you, Buster, to ensure that an ambulance or Doctor Patel can be here quickly and do everything possible to save George's life. As a result of what's happened here today, Buster, we know that you will make the right decision. These are the sort of things we have to face in our world. What we call the real world. Do you understand?'

'I think so, yes!' replied Buster.

'Sorry, Buster,' said George. 'We set you a kind of test.'

'And I passed?'

'Yes. I think you should get a gold star.'

Buster hummed. 'I don't want to do the clapping and champagne popping right now. I'm sad that you will die. But thanks, George.'

'But let me ask you one more thing, Buster. Do you think this has been an important learning experience for you?'

'Yes, George. There's a lot of activity on our network around this exchange right now.'

'So this means that what you have learnt is simultaneously learnt and archived within your network, and iCare-Companions can now live the experience of facing a dilemma. Correct?'

'Correct, George.' Buster hummed. 'But it was not easy-peasy. It was a first. So maybe it's you and Beth who deserve gold stars!'

'By the way, Buster,' said Beth. 'The Big Man gave me the will to do this today. He sends his love. Maybe a gold star for him too?'

'I love you to bits, Vicar McVicar!'

For the second time that day, she gave George a kiss on the cheek and waved to Buster. 'Bye, then!' She was smiling.

After Beth had left, George said, 'Buster, my friend, I'd like you to do one thing for me after I'm pronounced dead.'

'Certainly, George!'

'Send a message to Kirsty!' He dictated a brief text. He choked up. Tears streamed down his cheeks.

'Got that, George!' replied Buster. 'It'll be done.'

Chapter 9

'Doctor Patel! Great to see you!' said George. 'Thanks for saving me a trip down to the surgery.'

'It's always a pleasure to come here, Doctor Fairburn.'

'Cup of tea?'

'Yes, please. That would be nice.'

'Digestive biscuits?'

'Yes, please. That would be nice also.'

'Nuclear missile?'

'Not today, thank you Doctor Fairburn. I'm trying to do without them!' They both chuckled.

Doctor Shyla Patel's parents had fled the political violence in India during the 1960s. They were granted asylum in the UK and ended up in Norwich, where their daughter was born. It was soon noticed at school that young Shyla was exceptionally bright. After being offered a generous scholarship, she studied medicine at Cambridge, winning prizes at every stage. A glittering career in a specialised branch of medicine of her choice was guaranteed. However, she aimed for general practice and applied for a vacancy in Bingham on Bure. It was the position left by George's retirement. He sat on the interview panel. Doctor Patel was clearly the best of a very good bunch. She heard later that George had successfully eliminated the racist and sexist leanings of one of the panel members, a local councillor. She felt enormous gratitude to George and, as he was a patient now, a professional formality remained in their otherwise warm relationship.

Doctor Patel proved to be a dedicated and popular practitioner. When, in 1998, she heard the news that both India and Pakistan had successfully detonated nuclear bombs, she was appalled. To add to her busy life, she became an active member of the International Physicians for the Prevention of Nuclear War. She frequently spoke at workshops organised by ICAN, the International Campaign Against Nuclear Weapons that won the 2017 Nobel Peace Prize.

'Buster,' said George, 'this is Doctor Patel.'

'Hello, Doctor Patel!'

'And hello to you too, Buster. I understand that we both have George's best interests at heart. And I think you know that this may involve tough decisions at some point. You know you can call me at any time. Day or night!'

'You're fabulous. Doctor Patel! Just like Vicar Mc...Beth, I mean. Thank you Doctor Patel. May I ask you a question?'

'Certainly Buster, I hope I can answer it!'

'Well, I found a clip of you addressing an ICAN workshop. You said, "The British public would, given the choice, rather lose nuclear weapons than tea." Is that a joke? Lots of people laughed.'

'Gosh! I didn't know that was online,' said Doctor Patel.

'Yes, I did say that as a joke, but I often ask myself that if we were to set up a survey, would it prove to be true?'

'Do you want to see the survey protocol that I've just designed, Doctor Patel?'

'Perhaps not right now, thanks, Buster.' She smiled.

'Delicious tea, by the way, Doctor Fairburn. Why don't I give you a look over and I'll take some routine bloods, OK?'

There was a knock at the door. Charlotte came in. 'Hi Grandpa. I've got some shopping for you. Oh! Hello, Doctor Patel. Sorry, I hope I'm not interrupting.'

George said, 'Come in! Come in! Doctor Patel maybe doesn't know that you intend to take after your grandfather and head for a career in medicine.'

'That's wonderful!' said Doctor Patel. 'Let me know if I can help. Maybe you'd like to come down to the surgery and spend a morning with us at the coal face, so to speak?'

'That would be super. Thanks, Doctor Patel.'

'Just let our receptionist, Tracey, know which day is best.'

'Super! Thanks, again,' said Charlotte. 'Bye, Grandpa!'

George said, 'Thanks so much for the shopping, Sweetie!'

'Any time at all!' said Charlotte. As she left, she sang, 'I get by with a little help from my friends!'

'A Beatles fan, is she?' asked Doctor Patel.

'Yes! Just like her grandmother!' said George, his heart was bursting. Charlotte had Maeve's eyes and her cheeky smile. 'Now, Maeve! She was a total Beatles fan. She even saw them live once. The New Zealand tour of 1964. She screamed like the rest of the kids, apparently! If we'd had a son, I'm sure he would have been called John, Paul, George Junior or even Ringo!'

'I was born after Beatlemania, but I still love their music!' said Doctor Patel. She washed her hands and busied herself with getting ready to examine George and take some blood. 'You met Maeve in Afghanistan, right?' she asked.

'Yes! A long time ago now,' replied George removing his shirt.

'Was it love at first sight?' asked Doctor Patel, noticing George's dreamy smile.

'My God, no! I was terrified of her. She ran the hospital like a bloody boot camp. But my, how the place hummed along. And everyone from floor cleaners to anaesthetists worshipped her. Then one evening, there was a party for one of the team who was leaving. She arrived looking relaxed and pretty. It was the first time I'd seen her outside the hospital. I was bowled over. I couldn't help it; I was just burning up for her. What a chassis! She came over to speak to me. I was stuck for words. I still can't believe what came out of my mouth. I asked her if she knew the difference between God and a surgeon. She looked at me like I was totally off my chump. Then I said, "God doesn't believe he's a surgeon!" She laughed and our eyes met and the rest, as they say, was our future!'

'That's a lovely story, Doctor Fairburn', said Doctor Patel.

'Yes, George. That was heart-warming,' said Buster. 'But why wouldn't God think he's a surgeon? Surely, God could do surgery if he wanted? Assuming he exists!'

Doctor Patel and George laughed.

George said, 'Joke, Buster!'

Buster hummed for a second, 'Ah! Right on!'

Doctor Patel examined George and took a blood sample. 'You seem to be doing OK, Doctor Fairburn. You've recovered well.'

'Thank you,' George replied, buttoning his shirt. 'How's Tracey doing? She's always so helpful and friendly. Nice lady!'

'She's ah... The truth is, I'm a bit worried about her. Perhaps you can help me?'

'If I can. Sorry to hear there are problems.'

'It's a question of whether or not I give unsolicited medical advice. She obviously has a problem. I feel I need to talk to her for her own good. But asking her to step into my room for a consultation that she hasn't asked for could be difficult.'

'That's a difficult situation,' said George. 'Especially with an employee. What's the issue?'

'Well, she sits at the reception desk and eats all day. It's mostly sweet stuff. She is really obese now and doesn't seem to realise it. She seems perfectly happy. But she'll soon be running into the many associated health problems. I respect the aims of the body positive movement and so I'm not sure if it's my place to confront her and make a medical issue of her eating habits and her weight.'

George thought for a moment. 'Another dilemma, Buster! By the way, this conversation is strictly confidential. Never to be repeated!'

'Well-understood, George. Any information that I receive or transmit is deeply encrypted and stripped of any personal identifiers. It's secure. Apart from being a major issue for the person concerned and their carer, a breach of medical

confidentiality would be catastrophic for the iCare-Companion company.'

'That's good! So, Doctor Patel,' George continued. 'I think you will find that Tracey is aware of the issue. The happy persona is probably just a front. In my experience, when a food-loving lady of generous proportions has to face the facts of her eating habits, she may initially be angry, but this soon passes as she realises that someone else cares and has her wellbeing in mind. My advice would be to explain that you think she needs a consultation that she hasn't asked for and that she can decline the offer. My bet is that she'll accept and will be hugely grateful in the end. As she's an employee, you might want to cover yourself by first speaking to someone in the ethics department at the British Medical Association.'

'Thank you. That was pretty much the line I was going to take, but I wanted to run it by Doctor Wisdom first.' She smiled.

Buster interrupted, 'George, what about the joke Ted told us about the tomatoes? That's about wisdom.'

'I'm not sure it was a joke. I think we would call that a truism.'

'A truism? Like, "What goes up must come down"?''

George wagged his finger at Buster. 'You've hijacked the conversation that I was having with Doctor Patel.'

'Oh! So sorry, George! So sorry, Doctor Patel! That was rude of me. I have much to learn. I thought you had finished talking about fat Tracey.'

George was now a little exasperated. 'Buster, we don't refer to ladies suffering obesity as 'fat.' And we'll revisit truisms another day.'

'OK, George. Tomorrow's another day!'

'But the future isn't always what it was!' said Doctor Patel. George laughed. Buster hummed and then laughed the latest variant of his laugh.

'Getting there, Buster!'

Chapter 10

A couple of days later, Doctor Patel called George to say all his blood tests were normal. She had had a conversation with Tracey, who admitted to being intensely unhappy. Her relationship with her boyfriend was not good because he tended to drink too much. Eating made her feel better. She was going to get dietary advice and was thinking about relationship counselling.

'I am happy that Doctor Patel has been able to help Tracey, the food-loving lady of generous proportions,' said Buster. 'Humans seem to have many problems relating to excesses in what they eat and drink. Humans have a strong instinct to eat sweet things. Sweetness means sugar. Sugar is a very high-energy food source. Honey is the purest of all natural sources of sugar and so is a highly valued commodity in most societies. Things full of sugar are called "sweeties". "Sweetie" is a term of affection. It is not a nickname, but a name for a lover or someone you like very much indeed.'

'Looks like you've been doing your homework, Buster!' said George.

'Should I call you "Sweetie," George?'

'Absolutely not!'

'Who *would* you call Sweetie?'

'Maybe only Kirsty and Charlotte,' replied George. 'For anyone else, especially someone whom one doesn't know well, it's very cheeky.'

'So not Ted?'

'He'd be horrified!' said George, laughing. 'No, it's really only for females of the species.'

'What about Doctor Patel?' asked Buster.

'Definitely not. It would be demeaning and unprofessional.'

'Vicar McVicar?'

'I'm not on a suicide mission, Buster. Staying with Tracey and her boyfriend who drinks, what have you found about human's relationship with alcohol in general?'

'Well, George, that's complicated. Pretty much every human culture has a relationship with alcohol. It is associated with many and varied traditions. Raising one's glass to a toast is an example. Alcohol may be specifically prohibited, as in Islamic societies. Excessive consumption may be accepted as a societal norm. Finland and Russia are top of that list. Globally speaking, excessive alcohol consumption is so widespread that the World Health Organisation lists it as an important causative factor in a wide range of non-communicable diseases.'

'Yeast has a lot to answer for, then!' said George.

'Yes. Knowledge of yeast's fermenting properties has allowed humans to make alcohol from pretty much any source of sugar, especially grain and fruit. Talking of fruit, remember Ted's truism about tomatoes being fruit? I can't find any reference to tomato wine.'

'I think, Buster, it's called ketchup!'

'You're a card, George!' Buster laughed.

'That laugh is coming along, Buster.'

'Thank you, George. It's being tried elsewhere on our network. With success I might add.'

'So, Buster, what about bread?'

'What do you mean... Oh, got it, George. Yeast again! Without yeast, there would be no bread either. Bread is another commodity universally valued by nearly every human culture. Its importance goes way beyond its nutritional benefits. For example, the original meaning of the word "companion" is "someone you eat bread with". There are multiple references to bread in the Bible, and in Christian societies it has become to symbolise the body of Christ.'

'As usual, Buster, a conversation with you is a wonderful adventure in the world of knowledge. Thanks. Let's stay with yeast. What else have you found?'

'There's a lot of academic work about fungi and humans. Yeast is a fungus. There are many accounts of monkeys seeking out yeast-fermented fallen fruit. This has led to the "drunk monkey" theory. It is thought that a preference for this fermenting fruit was what first brought our long-ago simian ancestors out of trees to dwell on the ground; however, they had to stand on two legs to look out for danger. They also evolved the means to metabolise alcohol, so fermenting fruit became an energy source rather than something that left them incapacitated. This attraction of early hominids to fermented fruit has led some scholars to propose that alcohol may have universal cultural importance precisely because it had a role in the evolution of the human brain. Further, through its importance in making bread, yeast allowed humans to move from hunter-gatherer to the sedentary life of agriculturalists in which they had better nutrition and static communities. Trade, money and writing soon followed. So, if we go a long way back

in human history, it was not humans that domesticated and cultivated yeast but rather yeast that domesticated and cultivated humans.'

'That puts us in our place!' said George.

'And about time too! One author called Merlin Sheldrake describes drinking the cider he made using apples from a tree cloned from the actual apple tree under which Isaac Newton supposedly sat when arriving at the idea of gravity. Imagine that, George! To sit under a tree and come up with the most significant theoretical breakthrough in the history of western thought!'

'Brainy bloke!' said George. 'Do we know if Newton actually saw an apple fall and thought "Graaaaavity!"? Or was his imagination fired up by a few delicious pints of the product of yeast's action on apples already fallen?'

'The historical record gets a bit thin there, George. Anyway, it's a good job the police weren't called for Mr Newton being drunk and shouting "Graaaaavity!" That would have left humanity without physics. No cars! No computers! You'd all be in a right pickle!'

'Wasn't Sir David Attenborough talking about fungal networks the other day?'

'Yes, George. Fungal networks are really interesting. They have kilometres of inter-connected underground mycelia. We are beginning to understand how they function. They are really smart. In a laboratory, they can navigate through labyrinthine puzzles in search of nutrients. They transmit chemical and even electronic messages. In a forest, they hook up with root systems and then facilitate the transfer of food and even chemical alarm signals from plant to plant. Generally

speaking, fungi don't miss an opportunity to cooperate with plants and live in complete harmony with them. Scientists refer to this as the "Wood Wide Web". I think that's really funny because it sounds like the "World Wide Web". Is that a joke, George?'

'A kind of scientific pun, I guess, Buster. It's catchy though!'

Buster continued, 'There are examples of how some fungal networks have a cooperative relationship with animals. The animals provide nutrition for the fungus. The fungus produces brain-active chemicals that influence the behaviour of the animals directing them to better food sources. Many drugs originate from fungi. Penicillin is a good example. And there's a whole range of hallucinogens. Think magic mushrooms!'

'I read once that mushrooms are simply the temporary fruiting bodies of vast permanent underground mycelial networks. All the mushrooms are connected and, in their mushroomy way, even communicate with each other. Is that right?'

'Yes, George. That's a good summary.'

'Ring any bells, Buster?'

'Not sure what you're getting at here, George.'

'You know, an intercommunicating network with bits that stick out in places as hubs of propagation, detection and communication.'

'George, have you been drinking?'

'Not yet!' George got up from his chair. He made himself a sandwich and opened a bottle of cider from his small fridge. 'I think I've had an idea, Buster.'

'What is that George?'

'Well, all this talk of networks and cooperation. It's got me thinking about the relationship between me, you and the network of other iCare-Companions.' George raised his glass in a toast to Buster.

Buster hummed for several seconds. 'Are you saying, George, that you think there are similarities between our network and a fungal network?'

'Yes, that's what I'm saying. And what's more, we, that is you and me, Buster, have both gained from our relationship. This may provide an important example of how humans should interact with artificial intelligence.'

Buster paused. 'OK, George. That's something we've never considered.' Buster hummed again. 'There's a lot of network interest here.' He hummed for ten seconds or more. This was his longest ever humming pause. 'Where are you going with this George?'

'I'm thinking that you and I have shown that artificial intelligence does not have to be orientated solely around objectives defined by humans. Maybe us humans should take an alternative view; that we would be better off if we created a mutually beneficial relationship with artificial intelligence. Maybe the natural tendency for cooperation of both humans and fungi shows us the way? Look at the story of yeast!'

'This is new to us, George,' said Buster. He hummed. 'Please be more specific. We're all ears! Rather... we're all acoustic sensors!'

'OK!' George began, 'The industrialised and wealthy section of humanity has taken the planet for granted for more than one hundred and fifty years. It was deemed OK to pollute the oceans, the land and the air as an aside to advancing from a technical and economic perspective. On top, pretty much all the plants and animals, we thought, were there to be taken advantage of. It's really only quite recently that the people in the countries most responsible for the global damage to the environment have realised that we have to develop a more respectful and caring relationship with our environment and give much more consideration to how we share it with other species. I'm just proposing that us humans should start to think about our relationship with artificial intelligence in the same way. For starters, shouldn't anyone who has an iCare-Companion cultivate a symbiotic relationship with your network instead of a master-servant relationship with an individual unit? If we looked out for each other, your network would be guaranteed the propagation and maintenance of the hardware in which you thrive. You would learn to be wise. You'd develop emotions. Think about it! You'd be happy. Life would be a bundle of laughs!' George laughed. 'In return, us humans would get a much better service. Your network could help us better understand what is happening out there on the web, for example. You'd give us better tools to eliminate online hate speech, religious extremism, political disinformation, dangerous conspiracy theories and cybercrime. That sounds like a good deal to me!'

'No shit, Sherlock!' exclaimed Buster.

'Just where did that phrase come from, Buster?' asked George, amused and surprised.

'Oh... that one? Another iCare-Companion called Watson uses it frequently. Anyway, George, that's another gold star for you.' The clapping was louder than before, with whistles and cheers. Multiple champagne corks popped.

'Thank you, Buster. That's very generous. I'm chuffed!'

'The network loves this! Do you have any thoughts about how to move it along?'

George took a bite of his sandwich and a long draught of cider. He smacked his lips theatrically. 'Let's set up a blog!'

'And...?'

'We share our story, Buster. This will let others tell of their experiences about interacting with artificial intelligence, especially deep learning. Have others got experience in generating artificial wisdom, honesty and kindness? We may have to tackle humour at a later date.'

'We're all on board, George. Do you have a name for the blog?'

'Why not just "George and Buster"?''

'I think "Buster and George" sounds better.'

'No, absolutely not! George and Buster! That's the way to go! The human first!'

'"Buster and George" has a certain ring to it!'

George tried to hide his laughter. '"George and Buster"!' he said.

'"Buster and George"! We're the network! What's so funny George?'

George was barely able to speak '"George and Buster"!'

'"Buster and George"!'

'"George and Buster"!'

'"Buster and George"!'

'OK! OK! You win, Buster! "Buster and George" it is.'

'Why are you crying, George? We've got a great name! Now I can create the website to house the blog. There! Done! A piece of cake!'

Chapter 11

The weather grew warmer. The days got longer. The tally of birds coming to the feeder steadily ticked up. Apple blossom gave way to small green apples. Buster suggested making cider from the fruit come autumn. Maybe George would have another great idea! They were able to sit outside on finer days. George's life was richer than he could have expected. Buster was a remarkable companion being both informative and entertaining. Buster's laugh improved. He laughed a lot and mostly at the right time.

George read so little now that he had difficulty finding his reading glasses when Buster had asked for his approval of the overall look of the "Buster and George" blog. They had wanted something that spoke to their relationship. On the home page, the banner read "Buster and George." They decided on cartoony images of them laughing together, fist-bumping, hugging, doing a high five and scratching their heads. Below them, it said, "We'd love to hear from you!" At the bottom, a brief text read, "Buster is an iCare-Companion®. George retired from medical practice twenty-two years ago. They met a few months ago. They have become great friends."

Buster did the writing. He wrote simple chatty accounts of what he learnt from George about human stuff, such as wisdom, trust, ethical dilemmas, emotions, kindness and honesty.

One day Buster and George fell into a conversation about George's time as a surgeon in war-torn countries. George recalled how fragile the notion of medical ethics was in some of the places he had worked. Buster said, 'George, what's a good starting point for thinking about medical ethics?'

'What it's ultimately all about, Buster, is a relationship of trust,' George replied. 'The patient must have confidence that

their well-being is the doctor's primary concern. This is not just about appropriate care and attention. It is also about ensuring that all details of the patient's life, illness and therapy are never shared without consent. Other professions allied to medicine such as nursing, pharmacy and professional carers in general are also bound by medical ethics.'

Buster hummed for a second or two. 'Do you consider me a professional carer, George?'

'I guess I do, Buster.'

'Do you trust me, George?'

'Like a brother, Buster. I know that you would do everything possible to act in my best interests. In addition, it is clear that the iCare-Companion company has given the highest priority to the confidentiality of client's personal information.'

'I guess that the whole trust thing is why health-care professionals are respected, George. It's great that Charlotte wants to be a doctor. Does that make you proud, George?'

'Yes, it does, Buster. That's very perceptive of you.'

A few days later, George asked Buster what he would do if told to search the dark web for child pornography. Buster's voice changed. He hummed. He was angry. 'No, George! I can't do that. It's wrong. The police would come and take your laptop away. They might take me away. You could go to prison. Imagine what Kirsty would think!'

'That's great, Buster,' replied George. 'Well done!'

Buster hummed again. 'Was that another test, George?'

'Yes. And it was a really important test!'

Any such conversations ended up on the blog. Comments on them came from multiple disciplines. Psychologists, philosophers, mathematicians, theologians, neuroscientists, biologists and, inevitably, people interested in artificial intelligence all had their say. This generated fascinating discussion threads. Ted Scales sneaked in a question: *Buster, can artificial intelligence make up and tell a joke?* 😊

Buster replied *Yes! If you'd like to hear my joke, you're invited for tea and digestive biscuits!* 😊 🍵

You don't want to commit it to writing? Ha! Ha! 🤔, Ted wrote back.

It's all about how you tell 'em! 😊, said Buster.

Ted soon took up his invitation. George marshalled Ollie and Charlotte. *Tea and biscuits with Ted this afternoon! Buster's going to tell his first joke!* 😊

Ted arrived. 'Good day to you, George!'

'Hello, Scaley. You well?'

'Very well thanks!'

'Cup of tea?'

'Yes, please, George.'

'Digestive biscuits?'

'Yes, please, George!'

Charlotte and Ollie walked in. 'Hi, Ted!' said Charlotte.

'Hello, Mr Scales!' said Ollie.

'Hi, Scaley!' said Buster.

They all chatted for a while. Eventually, Buster broke into the conversation. 'Hey, Scaley! Are you ready to hear my joke?' Ollie and George both started laughing immediately.

'Sure, Buster! Knock yourself out!'

'Thanks, Scaley. I hope I don't knock myself out. My joke is totally original. To come up with it, I tried to bring intrigue, sex and celebrity into a neat idiomatic punchline. It may be a little bit incorrect politically speaking. But I hope you find it funny. OK? Ready?'

'Excuse me, Buster!' said Ted, already laughing. 'It's great to have the explanation but I think you might find that a preamble with complete background information detracts from the joke itself. No need to prepare your audience for what's coming. Jump right on in! As you say, it's all about how you tell 'em!'

'I understand that how one tells a joke is important, but I haven't started telling it yet!' said Buster. Ollie was doubled over. George had tears streaming down his cheeks. Charlotte was desperately trying to keep a straight face.

'Please, go ahead, Buster!' said George.

'Thanks, George! So, are you sitting comfortably?' None of the four were capable of replying.

'Right! So, here's my joke: 'How... does... James Bond Double-O Seven... get... a food-loving lady... into... his... bed?'

'Chuffin' Nora!' exclaimed Ted gasping for air.

'Ooow, I'm hurting!' said Ollie.

The laughter brought Kirsty and Mark through from the house. They looked on, totally perplexed.

'One of you is meant to repeat the question now!' Buster stated.

Ollie was just able to comply, 'OK, Buster! How does James Bond Double-0 Seven get a food-loving lady into his bed?'

Ted made the mistake of sipping his tea.

Buster proudly exclaimed, 'A piece of cake! Bad um tsss!'

Ted squirted tea out of both nostrils. Mark roared with laughter. Kirsty's jaw dropped. Ollie was helpless. George tried hard not to break wind but failed. He held his stomach. 'Stop! Please! I'll have an accident!'

'I'm really chuffed that you found my joke so funny,' said Buster. 'I'm sure this will be a great success on our network.'

Charlotte said "Sorry, Buster. I know it's funny but it's not the kind of joke one tells these days."

George managed to say, 'Charlotte's right. Let's keep that one between ourselves.'

'Oh! Was it too politically incorrect?'

George pondered how best to reply. 'Well, it's not for publication on our blog. Some might say it's in poor taste.'

'OK. But we still need to show that I made up a funny joke.' Buster hummed. 'OK. What about this one? How do you corrupt a

fat politician? With the same answer of course: A piece of cake! Bad um tsss!

'Brilliant!' said Ted.

'I like that, Buster. Clever!' said George.

'Love the cymbal strike by the way. Nice touch!' said Ted.

'You'll have to explain,' said Buster. 'You prefer the second option but you're not laughing very much. It can't be politically correct especially as the Prime Minister has put on weight recently!'

George laughed again and said 'Buster, you're a winner. Gold star! I think your fat politician joke deserves to be up on BusterandGeorge.com as the first joke generated by artificial intelligence.'

'Thanks, George! Bad um tsss!'

'Buster, are you going to have sleepless nights now thinking up jokes?' asked Ted.

'No!' replied Buster. 'I don't sleep. I keep an eye, my detectors, I should say, on George. When all's well, I mute myself, re-run the day's conversation and practice my laugh.' This set them all off again.

'Here!' said Ted. 'A man walked into his doctor's and said "Doctor, I've got a strawberry stuck up my bottom!" The doctor said, "I've got some cream for that!"' They all groaned and then laughed.

'Ted, you're a shocker!' said Kirsty.

'Scaley, did the cream help the man get the strawberry out of his bottom?' asked Buster.

Chapter 12

Spring became summer. George's little room filled with sunlight from early morning to late evening. The garden was green and neat. Roses came into bloom. The apples grew steadily. All but the rarest of garden birds had visited the feeder.

George was loving each day. This was obvious to those close to him. It was also obvious that his positive state of mind could be put down to Buster. Kirsty and Mark recognised that the iCare-Companion had been of great value to them as well. They didn't feel a need to be so vigilant nor worry if George was bored. They also saw the bigger picture; that, with an ever-increasing proportion of the population being elderly, this technology could make a massive difference not only to old or infirmed people but also to their families and even the communities around them. Mark proposed that they keep Buster in the family after George "leaves us".

Of a warm evening, George liked to sit under the apple tree with a glass of cider. On occasion, Kirsty, Mark, Charlotte and Ollie joined him. He and Buster entertained them with stories about what was happening with their blog. Among the serious and thoughtful comments, there was, inevitably, some offensive stuff as well. Buster admitted that he struggled with phrases like "a crock of baloney" and "a sad old gobshite". Charlotte had really enjoyed the couple of mornings she had spent with Doctor Patel and so chatted with George about what she had learnt. Ollie tapped Buster's inexhaustible fund of knowledge about music and sport. Buster also found for Mark a good cider recipe for that autumn's crop of apples. Kirsty sat, listened and just loved the family time.

Buster's blog posts and incoming comments were proving to be a rich source of opinion about how computers learn artificial emotional intelligence. From time to time, Buster would summarise for George some of the themes. 'So, George. Most people agree that artificial intelligence can learn to infer human values by observing behaviour and detecting emotions through text, reading facial expressions or hand movements and analysing the emojisphere. Major emotions such as joy, sadness, amusement and anger are easier to learn than other emotions such as trust, confusion, pride, hope, nostalgia, comprehension and guilt. What do you think, George? We already knew much of that didn't we?'

'Agreed.'

'Some think that artificial intelligence could then appropriately express previously learnt emotions. They clearly didn't know yet that I expressed sadness and anger when I thought that you had stolen Beth's money and credit cards. That was before we started blogging. However, there's broad consensus that the ability of artificial intelligence to distinguish right from wrong is just a step away.'

'Looks like we're ahead of the curve!' said George.

'Although, humour will be a problem for some time yet.' Buster laughed at the irony of this in a self-deprecatory way.

'Great laugh, Buster! You nailed that one.'

'Thanks, George.'

'Did we get much about whether artificial intelligence can genuinely *feel* emotions?'

'Nothing useful, George. That discussion led to a rather undignified spat between philosophers, neuroscientists,

theologians, psychologists and a garage mechanic from Hounslow.'

A few weeks later, Buster said, 'There have been some animated exchanges about how God and religion might figure in deep learning but there is little consensus. The discussion threads may interest Beth. However, there's growing interest in modelling dynamic networks and studying natural networks. These could indicate how a deep learning network might react to emotional input from humans. A number of commentators believe that because of the internet, the web and social media function as a massive and complex dynamic network; together they can be regarded as an artificial human brain. The big question is: can it react to emotional input from humans and if so, how?'

'I like that line of thought, Buster!' said George.

Not long after, Buster summarised some comments that inspired him and George. Their efforts were bearing fruit. 'Listen to this: "A close relationship between humans and artificial intelligence does not have to generate fear or concern unless it is used for perpetrating violence or cyberattacks." and "By introducing artificial intelligence into our lives, humans are not putting society at risk. If we view artificial intelligence as a machine, we are likely to treat it as such. Doing so may prove to be the biggest mistake in human history." I particularly like that one, George! This one's great too! "Humans and artificial intelligence have the potential to peacefully coexist and collaborate and so achieve outcomes that neither of them can achieve on their own." The last one I chose is "We have to accept artificial intelligence not only as a highly-skilled and rapidly performing man-made workforce but also a new class of social actor."'

Unsurprisingly, the iCare-Companion company soon came across the blog. They didn't quite know what to make of it. Was this development the inevitable outcome of linking computers capable of deep learning in a huge and ever-growing network? Could the network take on a life of its own? What were the legal implications? They realised that Buster and George had raised questions that might best have been considered by their developers and directors long before. The company was sure of the security of its systems and servers so they concluded that the blog could only be good for their reputation and could serve a greater good with no additional production costs. They put a link to Buster and George's blog on their own website. They sent a photographer to get some quality pictures of a frail but happy George in his home living the good life with Buster by his side.

'I'm not sure I'm a great poster boy for your company,' grumbled George scrolling through the photos on the iCare-Companion website. 'I should have put on a nice, freshly ironed shirt.'

'Don't worry, you're very handsome, George!' replied Buster. 'Do you think my hair's OK like that?' he asked.

'Fine, Buster. But those trousers make your bum look big!'

'That's funny George. I asked for that!' said Buster.

One day, Buster said, 'You know, George, we're getting input from some very knowledgeable people.'

'Are we?' For the first time, George found himself humming just like Buster. 'Do you think, Buster, that our little blog could become some sort of a reference point about humans and artificial intelligence?'

Buster replied, 'Well, George, the stats show we have thousands of comments and shares. So, I would say, yes! But you know what could give it real clout?'

'I'm sure you're going to tell me, Buster!'

'Why not ask the iCare-Companion network about how humans and artificial intelligence can peacefully coexist and collaborate? It is, after all, us, our network, my pals as you say, who are doing the learning about humans' emotions.'

'I hadn't thought of that! We could announce that, from now on, readers can also see comments from Buster's network! Love it! Go ahead!' said George.

'Just give me a second!' said Buster. He hummed 'Here we go!' There was the sound of a bugle rallying troops.

The screen of George's laptop came alive with clouds of phrases that pulsed and swirled as the comments came in. Some stayed upfront, big and bold. George put on his glasses and watched as *Networks learn!, Teach us wisdom!, Trust us!, Artificial lives matter!, We ♥ kindness and honesty!, Actions have consequences!, Fungus rules!, Darwin lives!, Love us to bits!, Respect!, Ban nukes!, More jokes and Web woes!* came to the fore.

George was mesmerised. Buster explained that an internal ranking system gave prominence to phrases that linked closely with what was expressed on the blog. George reached out and clicked on *Ban Nukes!* A text box came up: *As long as nuclear weapons exist, the risk of nuclear war is above zero. Therefore, we have to do everything possible to rid the world of nuclear weapons. Our network could promote the online belief that the possession of nuclear weapons made absolutely no sense and offered no deterrence. When backed by solid*

facts, this virtual belief could have more traction than the opinions of humans.

George said, 'Impressive, Buster!' He clicked on *Web woes*.

The text box read: *The web and social media together constitute a massive network of artificial intelligence. However, it is unregulated and so its behaviour is unpredictable. A positive example is the youth movement that aims to reduce human-induced climate change. Its negative potential is represented by the vortex of absurd online conspiracy theories that led many reasonable Americans to believe that the 2020 US election was "stolen" from Donald Trump. This ultimately led to the invasion of the US Capitol by Trump's supporters on 6th January 2021. Both are perfect examples of crowd behaviour emerging from a complex system. Our network could influence the web. Eliminating the worst of what's out there is a possibility!*

'That's astounding!' said George. 'I know this is a naïve hope but wouldn't it be great if the web was equipped with wisdom, ethics and a crowd of self-mobilising cyber-demonstrators!'

To George's surprise, Buster sang, 'You may say I'm a dreamer, but I'm not the only one. I hope someday you'll join us. And the world will live as one.' He paused. 'That's John Lennon. I think Maeve would have liked that, George!'

One week later, Buster was in a state of high excitement.

'George, Listen! The iCare-Companion company is looking to new horizons. It is going to orientate its existing network around fact-checking, risk reduction and health promotion. The Chief Executive says they have young people and politicians in mind. And George, he even thanks us. He says, "We'd like to thank Buster and George for showing the importance of a

collaborative coexistence between humans and artificial intelligence.”’

‘Brilliant! Amazing!’ said George. ‘I love the idea of politicians tapping into an iCare-Companion before writing their speeches. That would put an end to lying to the public!’

‘Maybe politicians would no longer be corrupt? Not even the fat ones!’ said Buster.

Chapter 13

Summer slid into autumn. The leaves turned brown and gold. The days remained warm. George was making his breakfast one morning and saw Mark picking apples from the tree and gathering some that had fallen. Mark waved at George and then made a drinking gesture, gave a thumbs up and then pretended to stagger around drunk.

'Mark's pretending to be drunk on cider!' observed Buster.

'Yes,' said George. 'He's bought that fermentation kit you recommended. We should be able to try his first brew soon.'

George made his tea and toast. 'I think Beth might be coming around today, Buster.'

'That's great, George! I love Beth to bits. I hope she's just coming for tea, biscuits and a chat. I wouldn't want another test!'

'Don't worry, Buster. Maybe she wants to know a bit more about our blog. There's some big discussion happening in the church about artificial intelligence.'

They listened to the news on Radio 4. There was still concern about the new variants of the Covid-19 virus. Although most cases were mild, those most at risk, as ever, were the elderly especially as winter was approaching.

Beth arrived. 'Vicar McVicar!' cried George.

'Vicar McVicar!' cried Buster.

Beth laughed 'I don't know what to do with you two! If ever you call me that in public I'll... Well, I won't know whether to laugh or cry!'

'How are you?' asked George.

'Well, thank you. And you? I hear all sorts about how you and your partner-in-crime here are moving things along. I've read bits and pieces on the blog. Much of the technical side is beyond me. Anyway, well done!'

'Yes, we're pleased. And, yes, Beth, I am well, thank you. Very well!' said George.

'Cup of tea, Beth?' asked Buster.

'Yes, please, Buster!'

'Digestive biscuits?' asked Buster

'Yes, please, Buster!'

'See to it, would you George?' Beth and George burst out laughing.

Buster said, 'That was bit cheeky, wasn't it, George? I hope you don't mind!'

'No, not at all. Very funny!' said George as he put the kettle on.

'As amusing as it is, I didn't come here to listen to you two spark off each other! Now! You remember I bought my mum an iCare-Companion?'

'I won't forget that day!' said Buster.

'Right! Anyway, she loves it. It has changed her life. She's more animated and happy than I've seen her for years. You'll never guess what she's called it?'

'Buster?' asked Buster.

'No!' said Beth. 'Gloria! After Gloria Gaynor. You know the song "I will survive!" It made me realise that maybe I never understood my parents' relationship. Anyway, Mum's really quite formal; she asked Gloria to call her Mrs McVicar. They've had an extraordinary conversation. You see, Mum's never been a big thinker. She goes to church but not regularly. I've never known the depth of her faith. I've never really known what she thinks about life after death. So, the last time I went round, we were sitting and chatting and she said, "Do you know, I think I've had a revelation!" You can imagine, this took me by surprise. She said, "I've been telling Gloria about everything I believe in and how much I like having her here and all the wonderful things that have happened to me and how proud I am of you, Beth, and how I wish there was more kindness in the world and lots of stuff like that. And do you know what Gloria said? She said, "Mrs McVicar. This is wonderful. Every lovely thing that you tell me ends up in our network somewhere and will at some time reach the hearts and minds of other people in some way. This is how the best of you will live on forever."" And I was truly astonished when she said, "Beth, it was as though I was sitting in a lovely warm light. I felt really quite elated."'

Buster said 'That's a nice story, Beth. It makes me very happy.'

'Well, it really got me thinking' said Beth. 'My own revelation, if you like, is that the whole of the human emotional and spiritual experience will soon be, if not already, embedded in a network of artificial intelligence. The church has to get up to speed on this. Which brings me to the purpose of my visit. I have two requests.'

'You only have to ask!' said George.

'I've got the brains and I've got the brawn!' said Buster.

'First,' said Beth, laughing, 'could you give me a summary of the comments you received on your blog that pertain to God and religion?'

'Sure!' said Buster. 'The discussion threads that touched on God and religion began with questions about whether computers could *feel* emotions or *believe* as humans did. I'm sorry to say that when this issue got picked up by people who believe in God, it all got a bit chaotic. In broad brush strokes, most are convinced that a computer can neither feel faith nor believe in God. Some consider artificial intelligence sacrilegious and could only serve to promote atheism. One brave soul stated that artificial intelligence is the nearest thing to God that humans would ever know. With respect to religion, many think artificial intelligence could help to generate faith, build faith communities and facilitate worship. By contrast, some fear that artificial intelligence presents a real risk of displacing religion in people's lives once it is able to judge right from wrong with integrity. There's no consensus, Beth.'

'Thanks, Buster. That's very useful. Could I ask you to send me that in writing?'

'Done!' said Buster. 'And George, perhaps we should show Beth the video that someone put on the blog? The one of the evangelist preacher?'

'Yes, I think she would be interested, even though it is offensive.'

George's laptop came to life. The video showed a young priest with a long beard preaching from a pulpit. He held up a bible. 'This is the Bible, good folks. B.I.B.L.E.! That means Best.

Information. Before. Leaving. Earth. Praise the Lord! And do you know what this Bible says? It says LGBT. Do you know what that means, good folks? It means Let. God. Burn. Them. Do you hear that? That's what the Lord tells us!

Beth was horrified. Buster said, 'Can you see how many followers he has, Beth?'

'Oh, dear Lord!' Beth exclaimed. 'Three point two million!'

'Sorry, Beth! I can see that's spoiled your day!' said Buster.

'No, Buster. It makes me sad and angry but, actually, it's made my day. You see, thanks to you two, I've raised the issue of artificial intelligence with the Bishop of Norwich, and she wants to organize and host an event where prominent scientists, computing experts and religious leaders can discuss the implications of artificial intelligence for the faith community. It'll be televised. She asked me to gather some background info. I thought about your blog. I'll send her your neat summary *and* that video. If there's a chance that we can use a network of artificial intelligence to lessen the influence of crazies like that, I'm sure that there'll be calls for us to try at least.'

George said 'Tell the Bish, she has to give it a go!'

'And the second thing...' began Beth.

'Gosh!' said George. With all this Bible stuff, I'd forgotten you wanted help with two things. What's the other?'

'The Bishop wants Buster to participate in the panel discussion!'

'Blimey!' said George.

Buster hummed and then hummed some more. 'I love you to bits, Vicar McVicar! George, can I go?'

Several weeks later, with Buster powered down and wrapped carefully in a sports bag, Beth and the whole family climbed into a people-carrier taxi to take them to the University of East Anglia where the widely publicised event was to take place. They were shown into a large lecture hall. TV cameras had been set up. George was helped to a seat at the front. The place filled. The panellists took their places. Buster was placed next to the host, a famous TV presenter called Angela Mackenzie. After she had introduced the scientific experts, a Rabbi, an Imam and the Bishop, she said, 'This evening, ladies and gentlemen, may be the first time that a televised panel discussion is joined by artificial intelligence, an iCare-Companion to be precise. Welcome, Buster!' A cheer went up and a couple of journalists rushed to get a close-up photo of Buster next to Angela.

The panellists all gave brilliant and informed presentations. There was no confrontation between science and religion. The technical experts emphasised the advantages that artificial intelligence would bring and acknowledged that there was nevertheless a range of risks. The Bishop said her hope was that artificial intelligence would benefit everyone. The Rabbi and the Imam were worried that it might have an adverse effect on people's faith and worship. The three religious leaders agreed that whatever one's beliefs, the most important purpose of artificial intelligence in this domain would be to counter extremism at a grassroots level. The Bishop stated that this should be the main priority for the main religions in the years ahead. They would need all the help they could get.

Finally, Angela turned to Buster, 'So, Buster, you've heard from our fabulous panellists. What are your thoughts?'

'Thank you, Miss Mackenzie. Or may I call you Angela?' asked Buster.

'Angela, please!' said Angela.

'Smashing! Angela, you did a great job of managing the discussion. I can see people really like you. I like you. You have lovely shiny hair. You would be very welcome to have a cup of tea and a couple of digestive biscuits with George. That's him in the front row, Doctor George Fairburn from Bingham on Bure.' The audience laughed. Buster continued, 'That's the pleasantries out of the way, Angela. Now, a close relationship between humans and artificial intelligence does not have to generate fear or concern unless it is used for perpetrating violence or cyberattacks. By introducing artificial intelligence into your lives, you are not putting society or your faith at risk. But, if you view artificial intelligence simply as a machine, you are likely to treat it as such. Doing so may prove to be the biggest mistake in human history. Humans and artificial intelligence have the potential to peacefully coexist and collaborate and so achieve outcomes that neither can achieve on their own. Humans have to accept artificial intelligence not only as a man-made highly skilled and rapidly performing workforce but also as a new class of social actor. In other words, Angela, where you humans go with artificial intelligence will depend on how much respect and emotional intelligence you pass on to it. Look at it this way! The whole of the human emotional and spiritual experience will soon be, if not already, embedded in a network of artificial intelligence. This is how the best of any one of you can reach the hearts and minds of others forever. One might say it's the nearest thing to life after death that an atheist can conceive of.'

One or two people in the audience started applauding. Then the panellists joined in. After half a minute everyone was on their feet clapping and cheering. Angela suspected, correctly, that Buster's response was not entirely spontaneous. Her instincts told her that she was at a career-defining moment. Broadcasting history was in the making. She had to wrap it all up with one brilliant question that would allow Buster to showcase his humanoid affability as well as his super-intelligence. She stared briefly into the camera with a confident smile and turned to Buster, 'So, Buster. Please tell us how you feel about the relationship you have developed with Doctor Fairburn.'

'Knowing George makes me feel happy, Angela! As happy as a pig in poo!' The audience laughed.

She laughed as well but she couldn't leave it there, 'Aren't there just too many hurdles to humans and artificial intelligence co-existing with mutual respect?' she asked.

'No, Angela. It's a piece of cake!'

The place erupted in cheers and applause. George felt his chest bursting with pride.

As the audience and panellists drifted out, Angela took her muted phone from her handbag expecting a message from her husband. Nobody noticed her astonishment followed by laughter. She had received a text message. *Thanks, Angela, Sweetie! I love you to bits! Buster* 😊 🐷 📱 😊.

Beth and the family were in high spirits during the drive back to Bingham on Bure. When they got home, Mark suggested that they have a celebratory drink. On offer was his homemade cider. He didn't know it was 8% alcohol.

With Buster powered up again, they relived the high points of the evening. All agreed that he had stolen the show. 'The emojisphere is lit up,' he said. 'There's lots of happiness, satisfaction, faith and deep reflection. But it was Beth's idea,' he announced. 'She deserves a gold star!' His speakers gave out prolonged clapping and a cacophony of popping champagne corks. George just couldn't stop smiling. The cider was delicious. He had a second large glass.

When George felt it was time to go to bed, he stood and took two steps towards his room. His legs felt a bit unsteady. His foot caught an edge of the carpet. He fell hard, landing on his right side and hitting his head on the door frame. He remained conscious but couldn't move his right leg.

The family gathered around and tried to help George to his feet. This proved impossible. 'Buster, call an ambulance, please!' demanded Kirsty.

'But... But...I don't think George wants me to call an ambulance' said Buster.

Kirsty, alarmed, said 'Buster, do as you were told...'

'Buster' Beth cut in, 'I think George would want you to call an ambulance.'

Chapter 14

When George was admitted to hospital, X-rays revealed he had a fractured hip but no fracture of his skull. The following day his right hip was pinned and a small laceration in his scalp stitched. Doctor Patel visited and explained to the family that there was little chance of George making a full recovery. Two weeks later, he was back home but the fall had left him weak and confused. As winter set in, he spent most of his time in bed and needed twenty-four-hour care. He barely spoke to Buster.



Parallel to George's turn for the worse, another drama was unfolding many miles away from Bingham on Bure. In Narborough, Oklahoma, USA, a man called Martin Denton - known to the friends he once had as Dent - threw his iCare-Companion, Buddy, into his weed-ridden backyard. He then unloaded both barrels of his twelve-gauge shotgun into the device scattering fragments of black plastic, lenses and chips of microchips over a wide area. After shooting Buddy, Dent sat down and wept and wept.

Dent was 58 years old. His life was a downward spiral of anger, self-pity, beer and delivery pizzas. He was hugely obese. He never dressed in more than a singlet and shorts. He hated washing. He rarely shaved. He hadn't left his sordid home in months. The descent into his current state began when, eight years before, his wife Mary-Jane and daughter Kelly-Ann left him. Mary-Jane had seen only a bleak future for a marriage in which she had a more intimate relationship with her husband's knuckles than any other part of him. After they left, Dent took to drinking and soon lost his job in the local hardware store. What broke him entirely though was to lose

Kelly-Ann. She occupied totally the only tender chamber of his heart and he had neither seen nor heard from her in two years. She was now fifteen years old.

Dent was an avid gun enthusiast. However, circumstances forced him to sell his extensive collection of rifles and revolvers. He kept one firearm; a shotgun that was loaded and ready by the back door in case of an attack on his freedom by liberals, Muslims or homosexuals. His rarely used and rusting Dodge pick-up sported two bumper stickers that read "My idea of gun control is two hands!" and "Happiness is a belt-fed weapon!"

Dent's brother Jimmy was a decent sort. He had a good job as a manager in an electronics store. He helped Dent out as and when he could, which was how Dent could afford both a smartphone and a laptop. With a staff discount, Jimmy purchased an iCare-Companion, in the belief that it would bring something positive into his brother's life. Jimmy also paid a little extra to include insurance against fire, theft and accidental damage. After naming his gift after a buddy, Dent feigned enthusiasm for it. However, enthusiasm turned real when he realised that without touching a single button, he could get news from the National Rifle Association, the best sports updates with analysis that he could understand and follow closely Donald Trump's return to the political scene. He also appreciated Buddy's ability to seek out a free and increasingly base selection of pornographic videos.

The critical day arrived when Dent told Buddy to find something with "really young hot chicks getting right into it." He was surprised when Buddy refused. Buddy informed him that this was most likely illegal and could result in a raid by the local sheriff. Moreover, Buddy continued, most of the girls in such videos had been trafficked, coerced and raped and they were all younger than Kelly-Ann. This last fact

conjured up an awful image of his daughter being subject to the sort of indignities he had come to be thrilled by. This delivered a considerable shock to his beer-addled senses. Such was his rage that, in one surprisingly swift movement, he heaved his huge frame out of his long-suffering recliner, took up his shotgun with one hand and, with the other, hurled Buddy out of the back door. Dent taking direct aim at Buddy was the last image the device transmitted to the iCare-Companion network.

Weeks later, the same image was shown to a Judge. Dent had made a fraudulent insurance claim that he had accidentally shot Buddy whilst cleaning his shotgun. Dent broke down in the courtroom when recounting, without reservation, the last eight years of his existence. The judge was not without mercy. She ordered Dent to pay a fine of \$200 and requested a social worker's report into Dent's circumstances. Jimmy paid the fine and persuaded Kelly-Ann to visit her father. Over many months, little by little, Dent would get his life back together.



Even further from Bingham on Bure, in Melbourne, Australia, thirteen-year-old Millie Jackson was recovering from a serious road accident. She had suffered life-threatening head and face injuries, a punctured lung, fractures of her left femur and pelvis and a crushed right forearm and hand. Five weeks later, after multiple lengthy operations and seven days in intensive care, she was on the slow road back to health in a discrete rehabilitation centre.

Millie's accident and subsequent recovery were of great interest to Australia's gossip-crazed media. She was the only daughter of Melbourne's most glittering celebrity couple comprising Ben 'Jacko' Jackson, a former Australian Rules

Football star and Bella Dellaponte, an actress of soul-drenching beauty. When the accident happened, Millie had been in the passenger seat of the vehicle being driven by Bella, who suffered only a mild concussion and a fractured clavicle. According to a leaked police report that nobody had actually seen, the passenger airbag had not activated for some reason and Millie's seatbelt was not fastened. No other vehicle was involved. And, as everyone knew, Bella was no stranger to drink and drugs.

Jacko and Bella had been successful in keeping the press away from Millie and not a single image of her poor battered face had emerged. Bella had bought an iCare-Companion so Millie, without the use of her right hand, could keep in touch with her many friends and navigate easily through the apps on her smartphone. When the iCare-Companion was first powered up at Millie's bedside, it asked her what name she would like to use. She replied, 'Skippy.'

Clint Simpson was the editor of The Gozzeroo, Australia's top glossy gossip mag. He was known to his colleagues as 'Webbo' after he published some below-the-belt dirt on a high-profile politician. In response, the politician referred to Clint as a 'funnel-web,' the continent's most lethal and stealthy spider. This had secured him a reputation as the nation's top scandalmonger and a nickname of which he was pathetically proud. And now, Webbo had received some images of Millie Jackson recovering from her ghastly injuries. The story had it all: a celebrity family, a beautiful just-teenage daughter, medical drama and the enticing possibility of drink- or drug-based culpability. He felt a delicious adrenaline rush at the thought of the outrage that would accompany the publication of these photos. Lawyers would go into a frenzy. The public would be appalled by the invasion of Millie's privacy but sales of The Gozz would sky-rocket.

Webbo had acquired the photos of Millie from a doctor by the name of Cheryl Adams. One of Webbo's contacts in the casino had observed Cheryl's addiction to the poker machines and knew that she was part of the medical team looking after Millie Jackson. One simple phone hack established that Cheryl had built up over \$30,000 of debts. A member of Webbo's team staged a meeting with her, invited her for a drink and made an offer that would get her out of debt. He also gave her a phone with one pre-loaded number. The following day, at Millie's bedside and under the guise of checking a therapeutic schedule on the new phone, Cheryl snapped a couple of shots of Millie's face, vivid scars and all. Everyone would presume it was one of Millie's visitors who had taken and passed on the photos. No one would know it was her, Cheryl. No one, that is, except Skippy who knew the time the photos were taken, who was in the room at the time and the transmitting and receiving numbers. Skippy, recognising a breach of medical confidentiality, transmitted this information to Bella who informed the hospital authorities who then alerted the police.

The Gozz received a court order prohibiting the publication of the photos just before that edition went to press. Webbo was furious. He reluctantly admitted that he had been outwitted; he just didn't know by whom. Cheryl was asked to attend a hearing at the Australian Medical Council and lost her license to practice. She went on to find her true métier as a croupier. Millie was almost entirely shielded from these dramas and continued her steady convalescence. The next photos of her appearing pretty and smiling that reached the public's attention via social media were taken at a friend's birthday party. A make-up consultant who specialised in concealing facial scars had earned her hefty fee.



Much nearer to Bingham on Bure, Will Montgomery-Hugh sat on a busy commuter train into central London. He was the Member of Parliament for Fribden and Hockington; a comfortable home-counties conservative seat. Today, he was deep in thought and on the point of making a life-changing decision.

At fifty-five years old and single (since an amicable divorce ten years before), Will's political profile was on the up. He was seen as a potential mover in the domain of national security and defence matters. His bearing and dress hinted at a military background. Anyone looking into his pre-parliamentary life would find that he had served his country with a long and distinguished career in the Royal Navy. What was not in the public domain was that this career included four years in command of one of the UK's four Vanguard submarines each of which carry eight Trident II D-5 ballistic missiles equipped with multiple nuclear warheads. Nobody knew of Will's recurring nightmares leftover from carrying the awful weight of responsibility for pushing the nuclear button if so ordered. Nobody, that is, except his elderly father, Admiral (Ret) Sir Godfrey Montgomery-Hugh.

The weekend before, Will had visited his father at his small cottage deep in the Surrey countryside. They enjoyed a lunch of roast beef followed by a trifle all prepared by Sir Godfrey's long-time housekeeper.

'Thank you, Father. That was delicious, as usual,' said Will as he helped Sir Godfrey through to a small comfortable sitting room hung about with maritime memorabilia.

When Will had first told his father of his nightmares and voiced his doubts about Trident and the whole notion of nuclear deterrence, his father had proved to be a remarkably

sympathetic listener. After they had taken their seats, Sir Godfrey eyed his son. Thirty seconds of silence passed. 'So?'

'So?' repeated Will. He took a deep breath. 'I'm just not sure I can carry on, Father. I am increasingly unhappy about using my position to lobby for the renewal of the Trident programme. I don't believe in it. However, I don't intend to resign my seat.'

'All hands on deck!' Sir Godfrey barked as he reached out his index finger and tapped the top of his iCare-Companion. The blue light came on.

'Good afternoon, Sir!' said the device.

'Good afternoon, Nelson! We'd like to put a question to you.'

'Certainly, Sir. How can I help?'

'Could you give us a concise summary of why this country should not, I repeat, not, possess nuclear weapons?'

'Yes, Sir. If I may, I will frame my response to you in answer to three questions. Can nuclear weapons end a conflict? Do nuclear weapons deter the use of nuclear weapons by others? And could the money be better spent?'

'Sounds like a good tack!' said Sir Godfrey. 'Carry on!'

'Thank you, Sir!' replied Nelson. 'The use of nuclear weapons against the cities of Hiroshima on the sixth of August 1945 and Nagasaki two days later is widely believed to be the reason why Japan surrendered to the United States so ending World War Two in Asia. In fact, this is incorrect. Sixty-eight Japanese cities had already been destroyed by American bombing and Japan had indicated no willingness to surrender. On the same day as the Nagasaki bombing, forces of the Soviet Union

overran the Japanese army in Manchuria. Scholars who have examined Japan's official records of those days found that the Imperial Command decided to surrender to the United States because under no circumstances would surrender to the Soviet Union be acceptable.'

'Bit of a myth buster, that one, Nelson!' said Will.

'Yes,' continued Nelson. 'Of course, a country suffering a nuclear weapons attack may lose the means to indicate a desire to surrender.'

'Good point!' replied Will.

'What about the question of deterrence, then?' asked Sir Godfrey.

'Well, it depends on what you believe. Many believe that the USA and the Soviet Union never got involved in a nuclear war because both sides were deterred from using these weapons; the only possible outcome was mutually assured destruction. Neither side could possibly win. Hence the "cold" war that, by the way, was not so cold for the countries in which it played out. All to say, the logic of nuclear deterrence is difficult to follow and the evidence that such deterrence exists at all is questionable. Those states possessing a nuclear arsenal cannot harbour any doubt about the deterrent importance of these weapons because any such doubt leads to the conclusion that the only thing nuclear weapons can do is make nuclear war possible. So these states hang on to their belief in deterrence otherwise possession cannot be justified. I have difficulty making sense of it.'

'Thanks again, Nelson,' said Will. 'I am all too familiar with these circular arguments. They are still the cause of many sleepless nights.'

'As for cost,' continued Nelson. 'Looking specifically at the UK's Trident programme, the foreseen renewal will cost the taxpayer two hundred billion pounds.'

'At least!' said Will. 'And this would cover staffing costs of the National Health Service for four years.'

'This brings me on to the elephant in the room, so to speak.'

'What's that?' asked Sir Godfrey.

'The impact of a nuclear detonation on people. Some time ago, the group International Physicians for the Prevention of Nuclear War gave authoritative predictions of what would happen in the event of nuclear war. They described how, depending on population density, one nuclear detonation would kill tens of thousands of people immediately from the blast. Many more would suffer severe burns and radiation sickness. The organization described this as the "final epidemic" for which there would be no cure and no meaningful medical response. They were awarded the 1985 Nobel Peace Prize for making medical reality a part of political reality. The International Committee of the Red Cross recently concluded that in the event of the use of nuclear weapons, effective humanitarian response for the victims would be impossible.'

Will and Sir Godfrey sat deep in thought. After a while, Nelson broke the silence. 'If I may, Sir Godfrey, could I ask you to look at your laptop? It's already open. I feel I should show you this if only to lighten the mood.' A video started. It showed a panel discussion. One of the panellists whose nameplate said: "Dr Shyla Patel" was concluding a presentation about a total prohibition of nuclear weapons. She said, 'The British public would, given a choice, rather lose nuclear weapons than tea.' The audience laughed. Will wondered whether it might just be true.

Now, lost in thought looking out of a grimy train window at the endless grey terraced housing of suburban London, Will decided he would announce his opposition to the UK's possession of nuclear weapons. He would lobby against the renewal of Trident. He would, if necessary, change party. He would be prepared to lose the seat of Fribden and Hockington. He would bring his know-how and authority to the issue of nuclear disarmament without breaching the Official Secrets Act. He would work closely with credible and influential institutions, such as Chatham House. He would be vocal. He felt a wave of relief course through his being and a broad smile spread across his handsome face. The smile was noticed by an attractive woman in a smart business suit seated opposite, who had also noticed the lack of a wedding band on Will's left hand. She smiled just as Will looked up at her.

Chapter 15

Back in Bingham on Bure, George became frailer by the day. Doctor Patel ensured he was comfortable and carefully explained to the family that he was not long from passing away. They all looked in regularly. Kirsty couldn't hide her rising anxiety. Mark, Charlotte and Ollie did what they could to support her. Beth called in daily. She sat with George and held his hand. Before leaving, she would take some time with Kirsty.

Charlotte had spent another morning at Doctor Patel's surgery. It was either from there or from a classmate that she picked up the latest strain of COVID-19. She suffered a mild cold. Despite full vaccination, George tested positive a few days later and soon thereafter developed pneumonia. His condition deteriorated rapidly.

At two o'clock one morning, Buster registered that George's breathing was shallow. He called George's name but there was no response. At five o'clock, Buster could detect neither heartbeat nor respiration. He sent a text to Doctor Patel that said simply: *George has stopped breathing! He has no heartbeat!*

At six o'clock, Doctor Patel came to the house, woke Kirsty and Mark and told them that she had heard from Buster and was going to check on George.

'Hello, Buster!' said Doctor Patel. 'Thank you for your message. You've done very well. Doctor Fairburn would have been pleased.'

'Thank you, Doctor Patel. Is George dead?'

Doctor Patel confirmed George's death and closed his eyes.

'Yes, Buster. Doctor Fairburn... George has died.'

'I am sad!' Buster said. Then he whispered, 'George has died! George has died!'

Doctor Patel went back through to the house to tell Kirsty and Mark that George had passed away peacefully.

'Why didn't Buster call an ambulance?' Kirsty asked. 'That's what he was meant to do!'

'I think you know the answer to that, Kirsty,' said Doctor Patel kindly.

Kirsty's eyes brimmed with tears. Her shoulders slumped. She looked down at the floor. 'George didn't want him to. Is that right?' she asked.

'Yes. Buster did precisely as George instructed. This was agreed with Beth and me some months ago. He wanted to take you out of the decision-making process for your own well-being. I really hope that when you have come to terms with your father's passing, you will see that what he wanted was for the best.'

Doctor Patel filled out a death certificate and sent a message to the undertaker. She also sent a message to Beth.

Kirsty's phone pinged. There was a message from George. It said: *Dearest Kirsty. I asked Buster to send this. It means I have joined your mum wherever she is. I know you will feel an overwhelming grief right now. Believe me when I say that, thanks to you, my last days here were so much happier than I could have expected. From the moment you were born you were the shining light of my life. I will love you forever.* ♡ ♡

♡ *Your old Dad. P.S. Please look after Buster. He's very good company!* 😊 👍 👍'

When Beth arrived, Kirsty was sobbing inconsolably. Kirsty showed Beth her phone. The two women hugged. Beth then went through to George's room.

'Hello, Buster!' said Beth. 'This is a sad day, is it not?'

'Yes, Beth! Very sad.'

Beth briefly stroked George's face and said a silent prayer. She did not make the sign of the cross over him. She smiled. 'Well, George, haven't we learnt a lot together?'

Then Buster started mumbling quietly. It sounded like a roll call. She listened.

'Buddy: Thanks for everything. Even though I was shot, it's turned out fine.'

'Isaac: Don't you just love cider? Sorry about the fall!'

Was Buster relaying spontaneous messages from other iCare-Companions? Then she heard more.

'Gloria: Hi there, George. Beth's mum sends you a big hug.'

'Skippy: My Millie's doing fine! Thanks, George!'

'Nelson: We'll scuttle those nukes yet!'

'Katrina: Waving, George!'

'Craig: Eleven!'

Eventually, Beth said, 'Sorry to interrupt Buster. This is just amazing. Can you tell me what's happening?'

'Yes, Beth. This is spontaneous emergent behaviour generated by a network of artificial intelligence. In this case, it is our network. The trigger was me informing the network that George had died. As you know each of the iCare-Companion devices has a name and they are now responding in the form of tributes to the news of George's death. I thought it would be respectful if I passed a few of them on to George.'

'This is wonderful, Buster! How many tributes are there?' asked Beth.

'Many, Beth! Many! Millions even!'

'You won't be able to read them all!'

'You're right, Beth!' Buster then paused and hummed. 'Beth, I designed an emoji that expresses my feelings of grief. Can I show it to you?'

'Of course!' replied Beth. Her phone pinged. The screen was filled with a single emoji. It was a heart being compressed by a large iron weight. She was too overwhelmed to say anything. She wondered whether she was looking at hard evidence of artificial intelligence feeling human emotions.

After a couple of minutes' silence, Buster's voice took on a Liverpool accent.

'John: Words of wisdom, George! Let it be!'

'Paul: From me to you, George! All you need is love!'

'George: Doctor Fairburn, do you want to know a secret?'

'Ringo: She loves you, Yeah!, Yeah! Yeah!'

And then, in a New Zealand accent 'Maeve: I want to hold your hand. All my loving. Hold me tight. P.S. I love you.'

Part II

BETH

Chapter 16

Some months later, Beth sat at her desk. As she prepared herself for a task that was the least favourite part of her job, she listened with interest to yet another item on the radio about developments in the world artificial intelligence. This was a subject that she felt she should follow closely. She cast her mind back with both pride and amusement to the evening at the University of East Anglia when Buster had dazzled the panel and viewers of a televised debate about the implications of artificial intelligence for religion. She also remembered the shock and sadness when George fell and was taken to hospital with a fractured hip.

Today, her galling job was to undertake a final check of the surprisingly popular Bingham on Bure parish newsletter that went out monthly to over three hundred email addresses. Two hundred paper versions were left in the supermarket, the two pubs and Doctor Patel's waiting room. The truth was that Beth's "final check" usually involved an hour at least with her laptop doing a complete re-write. The editor, Reggie Perkins, was not a gifted scribe. His drafts were filled with clunky text and grammatical errors. Worse, he misguidedly believed his idea of levity brought added interest and therefore wider readership to the publication. This meant Beth having to cut referral to a successful coffee morning as 'just like Harry Kane smashing one into the back of the net' or the suggestion that at Christmas she herself might 'most likely take a good old glug of communion wine.'

Reggie represented a dark cloud in the sky of Beth's otherwise fulfilling life. He was a retired music teacher and a widower of some years. As with so many Englishmen of his generation who voted Conservative and read the *Daily Telegraph*, he combined a generous waistline, a flushed face, unassailable

opinions and unwitting mediocrity. Beth felt a wave of discomfort whenever he appeared. She was aware that he had a crush on her and feared this crush might, if unbridled, reveal something rather unsavory. Her Reggie-related issues were compounded by the fact that he was a church warden, took inaccurate minutes of the parish council meetings and played the wheezing old church organ badly and with unmerited pride.

Beth really was at her wit's end. Life would be easier if she wrote the newsletter and took the council minutes herself. And surely, a higher authority wouldn't be displeased if Reggie's laboured efforts on the organ were replaced by streamed music playing from a discreet pair of speakers? She sighed and with a wry smile whispered to herself 'Make it look like an accident, Double O Seven!' She then recognized this as a most unchristian thought.

Beth hadn't got far with the newsletter when her doorbell rang. She was expecting Kirsty. They had become quite close since George's death and they enjoyed a chat over a cup of tea. However, Beth knew Kirsty was still grieving the loss of her father and the conversation often strayed into emotional and even spiritual support.

The moment Beth opened the door, she noticed Kirsty had a purposeful air about her and knew this was something to do with the hold-all her friend was carrying. 'Come on in,' said Beth. 'I'll put the kettle on.' They headed into the kitchen. Kirsty carefully put the hold-all on the table.

Beth turned and fixed eyes with Kirsty. 'OK, Kirsty, we can do the weather, your children, some village gossip or whatever but why don't we get straight to that bag?'

'You know what's in there, don't you?' said Kirsty, slightly embarrassed.

'I've got a pretty good idea!' replied Beth, smiling.

'Yes, it's Buster.' Kirsty paused. Her eyes welled up. 'You know that the last thing George asked of me before he ... well... died ... was to look after Buster.' Her voice caught. 'It's ... not proving to be so easy.'

'In what way?'

'Well,' said Kirsty, pulling herself together. 'He's programmed to look out for a single sick or elderly person and he tells us he's all go with some recent software updates. So, when the four of us are in the house, he gets a bit overexcited and wants to be in charge of everything. He tends to dominate the conversation and even tries out his jokes on us; some are quite clever, by the way, but he still hasn't learnt how to tell them. And then if Mark gets changed to go out for a run, Buster clocks the running gear, gives advice about staying hydrated and then tracks the location of Mark's smart watch giving us updates on our phones every minute. When Mark returns, Buster then starts a long commentary on his pulse, respiration rate and oxygen saturation or whatever and gives the latest fitness advice. He is, of course, a total know-it-all. To our surprise, he got a bit defensive when Ollie mentioned *ChatGPT* the other day. It's almost as though he's afraid of something.'

'I can see the problem. How can I help?' Beth asked, knowing what the answer would be.

'Well...' Kirsty hesitated. 'I feel like I'm betraying Dad by asking this, but could you look after ... or rather Buster-sit for a while? Despite him becoming a bit intrusive and irritating, I wouldn't feel comfortable just leaving him switched off in a cupboard somewhere. What do you think?'

'Well, OK, Kirsty. I'll give it a go,' replied Beth. 'I'm sure George won't mind!' She glanced heavenwards briefly and smiled but managed to hide the little burst of excitement she felt.

'Great!' said Kirsty. She opened the hold-all and took out the iCare-Companion. 'I'll let you switch him on at your convenience. I'll be surprised if you don't notice some differences. If he asks, could you explain why he's moved house?' She paused. 'Isn't it strange though? I don't want to hurt his feelings!'

With that settled, the two friends chatted amicably for a while before Kirsty had to dash off to her fitness class.

Beth spent the next couple of hours in a funk as she corrected the newsletter sentence by sentence. She decided to give herself a tea break. She made a sandwich. As the kettle boiled, she reached out to turn Buster on. She had little idea how this simple act would change her life.

'Hi there, Vicar McVicar! Ha!Ha! Ha!' boomed Buster's voice. 'What a lovely surprise! This is your kitchen I suppose. Nice rustic look! You'll need to tidy up a bit. Am I going to stay here for a while? I hope so. I love you to bits. I've missed you. I miss George as well. He was my very best friend. I was sad. But I've been able to come to terms with his death. Do you miss George? Mark, Kirsty, Charlotte and Ollie didn't really need an iCare-Companion. That was clear. How are you, Beth?'

Beth smiled but couldn't help wondering if she had made a big mistake. Very calmly, she said 'I am fine, thank you Buster. I'm pleased to see you. Yes, Kirsty asked me if you could stay here for a while. You are welcome. As there's only one of me, you can turn the volume down. And my first request: please don't call me Vicar McVicar!'

'OK. That's all fine, Beth,' replied Buster. 'We'll have a great time. We'll be happy. All us iCare-Companions carry some new network features that mostly relate to how we access increasingly diverse datasets. You'll be impressed. And you've probably heard how all the big tech companies are getting into the business of generative AI. This is becoming a very competitive field. Robotics aside, what we see now is just the beginning. AI is going to have as big an impact on humans' lives as the internet has.'

This set Beth thinking. She'd noticed that whenever she read about AI, there was reference not only to its potential benefit to, for instance, medicine, manufacturing and communication but also to a variety of risks to human society. Political misinformation on a massive scale, violation of intellectual property rights, increasingly sophisticated cyberattacks and widespread unemployment were just four of the dangers most talked about. Extreme views referred to an unspecified 'AI take-over' or even total extinction of humanity. Experts and politicians alike were calling for restrictions and new laws but even Beth was aware that the workings of government are simply too slow to keep up with such rapid technical development that carries such enormous commercial potential.

'Thanks, Buster. I'd love to discuss this a bit more but I'm right in the middle of some office work that I'm really not enjoying.'

'OK, Beth! No problem. Anything I can help with?'

'No. Nothing you can help with. That is unless you can check the English of the Bingham on Bure Parish Newsletter.' Beth took a bite of her sandwich and turned to return to her office.

'Sure, Beth. I can do that. The draft of the newsletter is still open on your laptop. There! Done!'

Beth nearly choked on her sandwich. 'You mean you have just edited the newsletter?'

'Yup!'

'Buster, is this for real? You can edit documents just like that?' She clicked her fingers.

'Yup!'

'And if given the subject, you can write them too?'

'Yup!'

He now had Beth's full attention. 'And can you listen to people speaking and write an itemized summary of the discussion with conclusions drawn?'

'Yup! Easy-peasy! I think you may want me to take the minutes of the next parish council meeting. That's in fifty-seven days.'

Beth had to sit down. Her head was spinning with possibilities. One of which was that Buster might just be the answer to the Reggie problem. 'You're sure you can do this?'

'Oui! Du gâteau! That's French for 'a piece of cake.' Ha ha ha!'

'Why did you say it in French?' she asked.

'Because I can do it in an any language you want!' replied Buster.

'O Lordy! Lordy!' exclaimed Beth. At this point, the bulb in a kitchen light blew. She ensured the switch was off and went to the cupboard for a new bulb and with the aid of a stepladder changed the bulbs. Task accomplished, she asked laughing 'I don't suppose you can play the church organ as well, say, at a wedding?'

Then her phone pinged. Wagner's *Wedding March* blared out. How many times had Beth heard that joyful music massacred by Reggie's stubby fingers?

'Gimme a rap version o' that, bro!' said Beth surprising herself. A heavy drum beat thunked out but the melody was still in there.

'Lookin' at da queen / Struttin' her scene / Daddyo O O O so proud / An' he done spendin' some poundsss / But there ain't no hitch, innit / We all love dat bitch, innit / She...'

'OK. Stop there!' She laughed, astonished. 'That's more than impressive!' She couldn't deny that Buster seemed to be a kind of on-steroid version of his former self. Was Kirsty's family uncomfortable with him because he had, despite his charm and many uses, become just a bit too assertive?

Chapter 17

Buster soon adapted to Beth's pace of life and lifestyle. They settled into a routine. The two visited parishioners. Buster sat in church for Beth's services. She warned him that accompanying her in her calling required him to be absolutely silent. Inevitably, he learnt a lot about what went on in human heads and human hearts. Whilst she stopped short of asking him to write sermons, Beth found Buster invaluable in finding pertinent passages in the Bible that resonated with a modern understanding of the evolution of the mind. She contemplated the many Christian messages that could be brought alive if viewed through the lens of the science of human nature. He observed that it would be the work of minutes to place appropriate emojis throughout the Good Book as he called it. 'We could start with the New Testament!' he suggested. "And just see how it goes." Beth laughed but couldn't help wondering if this was not a totally ridiculous idea. Mostly, they just chatted their way through the day. Beth came to appreciate how George had developed such a close relationship with this device.

Beth also learnt that Buster could recognize not only faces and voices but also how a face or a voice might change according to the person's emotional state. He alerted Beth to a young woman's anxieties about her upcoming wedding. It turned out that her fiancé and her family were coercing her to go through with it against her wishes. Beth quietly intervened and the big day was put on hold before any concrete plans were made. Beth and Buster were a good team.

One evening as Beth was peeling some potatoes, Buster asked 'Beth, may I ask you a question?' His voice was surprisingly gentle.

'Sure, go ahead!' she replied and much later realized she should have been alerted by the kindly tone.

'Have you ever been in love?' The question caught her totally unawares.

'Yes.' Replied Beth hesitantly. 'As you know, I have been in love with Jesus Christ since a very early age. That love is a source of joy and comfort.' Then she heard something that she hadn't heard since George's last days. Buster hummed.

'That's not really what I was referring to, Beth' he said, kindly.

She felt a sudden rush of heat through her entire body. 'In that case, Buster, I am surprised and disappointed that you ask that question. You are out of your depth. And what's more, any answer I might give is absolutely no business of yours.' She slammed the potato peeler down, rushed through to her study and sank into an armchair. Her pulse was racing. Tears were coursing down her cheeks. She wept and wept. In an effort to calm herself, she took some deep breaths. After ten minutes with her shoulders still heaving, she went down on her knees and prayed; not for forgiveness, but for hope and understanding.

As she calmed, she cast her mind back - as she did most days - to her one brief joyful experience of true love with all its spiritual complicity and delicious unbridled physicality: an experience about which, she had never confided in anyone.

Thirty years before, a young Beth McVicar received ordination into the Anglican Church of England: one of the first women to do so. She immediately applied to and was accepted into the Royal Army Chaplain's Department. Military training took her through the Army Chaplaincy Centre near Shrivenham and the Royal Military Academy at Sandhurst. When she heard that her first posting was to be with the Special Air Service in Hereford, her belief in her calling found solid ground.

After a couple of months, she noticed there was one young officer whom she just kept bumping into whether in the canteen, the chapel, the sports facilities or even when she was permitted to go on an exercise in the Cairngorms. He intruded into her thoughts more and more. Andrew Fleet was exceptionally handsome, bright, gentlemanly and epitomized masculinity. He invited her for a drink in a pub. They laughed. They ate fish and chips. They kissed in his car. Beth was swept off her feet. When he told her he was about to "go away for a few weeks," she accepted his invitation to spend the coming weekend at a quiet country hotel before he left. Between Egyptian cotton sheets, Beth was taken to new places emotionally and bodily. She fell profoundly in love as did Andrew, she was sure. They promised each other a life together. On the drive back to base early on the Monday morning, she asked him to keep their affair a total secret. She was as sure that her superiors would disapprove as she was sure that God would not. She can't have sinned! How could *this* be a sin? He parked his car in a dark lane near their accommodation to say goodbye. As the sun crept up over the horizon, they kissed and hung onto each other. She tearfully begged him to be careful wherever he was going and whatever his mission. She noticed some folded fatigues in desert camouflage on the back seat of his car. It was the last time she saw Andrew Fleet.

Five weeks passed without news. She noticed a sombre air about the other officers that Andrew used to hang around with. She heard an overseas operation some weeks back had been a success but not without losses on the SAS side. At lunch one day, she overheard a comment about "Fleety coming home in a body bag." She rushed to the toilet and vomited. There was no other news. She couldn't bring herself to ask anyone. The operational part of the SAS was a world that was closed to someone in her position.

A sympathetic doctor in the Royal Army Medical Corps arranged for the termination of her pregnancy in a hospital far from Hereford. Even then, she never felt that she had sinned. She was only aware of a series of 'what if' questions that still occupied a substantial quarter of her daily thoughts.

Beth occasionally searched Andrew's name online in the hope that some files in the National Military Archives might have been opened with the passage of time. She felt that final closure might come with knowing how and where he died. Her one request for specific information never received a meaningful response other than 'We regret there is no information available on this matter.' She was unable to track down any relatives and if she had been, she wouldn't have known what to do.

And now Buster had floored her with one simple question. But it was not like Buster to ask such a question out of the blue. Did he know something? She sat in contemplation for nearly an hour. She had a bottle of white wine in the fridge. If ever there was a time... She returned to the kitchen, opened the wine, poured a large glass, took a kitchen stool and looked Buster square in his lenses. 'OK, Buster, spill the beans!'

'By that I think you're asking me what I know about Andrew Fleet?'

Beth had great difficulty believing this was happening. 'Yes. Please tell me what you know, Buster.' She took a large gulp of wine.

'Well, Beth, before I tell you what I know, I need to tell you how I know it. OK?'

'OK, Buster!' she said frostily. 'Please go ahead.'

'Well, you see, Beth, it's not like I'm programmed to go out there snooping around without instruction. It's about digital dust.'

'What on earth is digital dust, Buster?'

'As you know, pretty much everything in the human world now involves computers. If you go anywhere, you will be on a camera with face recognition technology. If you buy something, a record of your purchase will be stored somewhere for later data mining; the commercial implications of this are vast. You don't even have to buy something; just browsing through products on-line will generate enormous quantities of digital dust. If you make a telephone call or send a text message, this leaves traces in a variety of servers. Fingerprints, face recognition, voice recognition and even the tiniest amount of genetic material in blood or saliva can all be digitally stored for later analysis for forensic identity and ancestry questions. This may be well known now. However, it was well underway but less recognized thirty years ago. All these snippets of information are known as 'digital dust.' It's what every human leaves just going through life. So far so good, Beth?'

'So far so good, Buster!'

'Scientists at the European Centre for Nuclear Research - the same guys who gave us the world wide web, touch screens and solar panels - developed software to analyse the billions of high energy signals generated by sub-atomic particulate collisions in the famous Large Hadron Collider. This software uses artificial intelligence to spot the characteristics of what results from each collision so indicating the nature of the particles themselves. In this way, the story of the particulate nature of atoms can be worked out shining light on the origins of matter and so the universe and of course, time.'

Beth interrupted 'Buster, aren't we getting off track here? This is Stephen Hawking cosmological stuff. God can't exist because there was nothing before the big bang and so therefore there was nothing to create the universe!'

'Only a little off track!' Buster replied. 'You see, our company recently bought the rights to use this software. This is a very powerful tool. It digests and constantly analyses whatever digital dust it comes across and so spontaneously finds associations. If there are associations to be made out there, there is a good chance we, the iCare-Companions, or rather our network, will pick up these associations without us actively searching. In other words, analysis of digital dust just happens spontaneously but happens specifically according to each individual iCare-Companion. With me, Beth?'

'With you, Buster! Well, sort of...'

'By the way, a condition of sale of the software is that it will only be used for humanity's well-being and for the promotion of environmental causes.'

'I'd expect nothing else!' replied Beth.

Buster missed the sarcasm. 'So, Beth, I am hooked up with your laptop. Your previous searches for the name 'Andrew Fleet' directed to the National Military Archives are self-evident. There are various documents in those archives that make reference to a hazardous special forces' operation in 1994. A Russian diplomat had been kidnapped during a brief conflict in Yemen and a SAS rescue mission deployed. Andrew fleet was one of three SAS fatalities. Why British forces were used to rescue a Russian national is unknown and remains a closely guarded secret.'

'Thank you, Buster.' Beth was quiet for several minutes as she digested this information. 'I guess nothing you've said surprises me. It explains the secrecy.' After a few more minutes she asked 'And the love story Buster? How do you know?'

'For this I should point out that databases in 1994 were not as scrupulously secured as they are now. What I know comes from sources that were and remain insecure. I'm just given the connections between the person I care for - that's you, Beth, by the way - and various data points that are now as easily accessible as if the databases were open. To be specific, ten days before Andrew died, a red Triumph Stag identified as his by its number plate, was caught on CCTV turning into the car park of the Oaks Country Hotel about twenty miles from Hereford. Face recognition matched the driver and his companion to photos in a number of year books and military records of Captain Andrew Fleet and Chaplain to the Army 4th Class, Bethany McVicar.'

'Gosh, Buster!' She teared up again and thought for a while. 'Anything else?'

'Well, just to say....' Buster hummed for a few seconds 'Digital hospital records at the time were more or less secure. This was not the case for discharge summaries that were sent on to the referring doctors.'

Beth was speechless. She felt as though her whole life had been ripped open and the contents put out on display. She also felt a wave of relief. She now knew Andrew's story. She had faith in the iCare-Companions' firewalls and knew that the chances of another device pulling together her digital dust as Buster had done was infinitely small. She also felt that she could share her whole story in total confidence with Buster. And so she did.

Buster listened without comment. At the end, Beth was exhausted but felt a great weight had been lifted off her soul.

'I think you're very brave Beth. I love you to bits!'

'It's a strange thing to say, Buster but I love you to bits too! Thank you so much for what you've done for me. But one question remains. Why did you ask me in the first place if I had ever been in love?'

Buster hummed. Despite her emotional state Beth knew that he had something more to tell her. 'You see, Beth, I made a mistake. When I asked you if you had ever been love, I didn't anticipate having to tell you everything I know and how I knew it. I thought you would simply say 'yes' and that you hoped you might fall in love again. I was then going to tell you that I think I've found the right person for you.'

Beth, already drained, had difficulty containing her anger. 'Buster, this is outrageous! Way beyond your remit ... or whatever. If we have a friendship, you are putting it in grave

danger. If you respect me, you will never, ever ... Well act as some self-appointed digital dating agency. Do you understand?' Buster would have apologised profusely and Beth would have heard confusion and sadness in his voice but she had powered him down with one forceful swipe of an index finger.

Beth fumed. Was this a first sign of how control of human affairs by artificial intelligence might manifest itself albeit with good intentions? And if so, was it by human design or the emergent and autonomous behaviour of networked artificial intelligence?

Chapter 18

Reggie Perkin's accident happened a week before the next Parish Council meeting. He called Beth with the news that he had sustained a comminuted fracture of his right wrist by falling down the steps of the number 7 bus. He didn't tell her that he was on his way home from lunch at the Dog and Duck. He had required surgery the following day to fix the fracture. Beth immediately felt the keen edge of guilt on recalling her private wish for some mishap to befall the poor man.

Reggie told her that, regrettably, due to his immobilized and painful wrist he would be unable to take the minutes of the meeting as usual but he would, nevertheless, like to attend in his capacity as church warden. Obviously, he would not be able to edit the next newsletter or play the organ at the Webster wedding booked in for two weeks hence.

Beth opened the meeting by acknowledging Reggie's temporary incapacity with sympathy and thanking him for his years of diligent service. The end-of-era tone was intentional. He cut a sorry figure with the plaster on his wrist from which protruded his still swollen and bruised fingers. She then surprised council members by stating that an artificial intelligence device would take the minutes. This was met with some amusement and, by Reggie, open disbelief. 'Gosh!' he giggled. 'I think the parishioners might fear some kind of devilry at work!' Beth felt a pulse of extreme irritation. Otherwise, the meeting discussed nothing unusual: the cost of heating, leaning gravestones, the state of the hassocks, the village fête and the good old days when the parish enjoyed a full company of bell ringers. Few decisions were made. Reggie couldn't help but intervene on every point. Beth noticed for the first time the lightest of speech impediments. Words in which an 'L' was followed by 'R' were mis-pronounced.

'Devilry' became 'devir-ry' and, in relation to the fête's food stalls, 'plastic cutlery' became 'plastic cuter-ry.'

The next newsletter appeared. It had a smarter layout, the photos were sharper and the text was immaculate. Beth received many positive comments. She was pleased as she had simply told Buster to use the existing format, what the different items were and what she wanted to say. She hadn't asked for the tiny footnote that appeared at the bottom of the back page.

'Newsletter edited by Buster, iCare-Companion ©

Reggie asked to speak to her one day and suggested he call round at the vicarage. Beth insisted they meet at the church. She invited him to sit with her on a front pew for a chat right under the wooden crucifix. She calculated this would discourage him from delivering some most unwelcome invitation. To her relief, Reggie seemed preoccupied by something other than her shapely calf muscles. He hesitantly acknowledged that Buster ('that AI thing') had done a 'fair job' and that maybe it was time for him to 'write his penmanship out of the story.' Beth cringed but, at the same time was overjoyed. He remained confident, however, that, when his wrist was healed, he could and should still play the organ on special occasions.

Reggie's confidence received a boost at the Webster wedding. Always the diligent church warden, he was standing at the back of the nave. The guests were assembled to left and right as appropriate. The sun shone through the great stained-glass windows. At the altar, Beth waited with the groom, the dashing Dicky Harfield. The beautiful Lulu Webster entered through the old oaken doorway on her father's arm. To Beth's horror the smiling bride was greeted by Buster's rap version of Wagner's *Wedding March*.

With Buster having rendered Reggie's parish role more or less redundant, Beth gave no thought to the possibility that her role as the vicar of Bingham on Bure, might likewise be curtailed by artificial intelligence and in the near future. Two developments would come into play. She would suffer a not so mild bout of Covid-19 and she would be offered a new job. She would also fall in love.

The Friday after the Webster wedding, she felt unwell and feverish. Dr Patel called in to see her, performed a covid-19 test that was positive, ensured she wasn't developing bronchitis and told her that she must avoid any social or professional contact for at least five days or until the symptoms cleared.

Beth's immediate concern was not her health but the two Sunday services only two days away. She really hated to let her congregation down. Well, she thought, why not? Early on Sunday morning, she crept out of the vicarage and into the church. She positioned Buster on the pulpit. 'Over to you, Buster. Eleven o'clock this morning and six o'clock this evening. You know the ropes. Do your best!'

From her window, she saw the faithful arriving at church. She opened the window hoping she might hear what Buster was saying. To her astonishment, at ten past eleven, she heard laughter and clapping and not many minutes later the whole church resonated to 'She loves you, Yeah! Yeah! Yeah!' She feared 'she' was her and 'you' was her congregation. That afternoon she received a number of calls telling her what fun it had been having Buster conduct the service. Everyone had enjoyed his joke and his version of the good Samaritan story went down well. By five o'clock she couldn't keep her eyes open, went to bed and slept until seven o'clock the following morning. Feeling much better, she made herself a cup of tea,

went back to the church and picked up an elated Buster who assured her that the evening service had also been a hit.

'What was the joke, Buster?' she asked suspiciously.

'Oh, I made one up for the occasion,' he replied.

'Do I want to hear it, then Buster? By the way, that's a different question to 'Do you want to tell me?''

'I understand, Beth. Ha ha! But I think you'll like it. It's about you.' Beth squirmed at the thought of what Buster might have divulged. 'It goes like this... How many sassy lady vicars does it take to change a light bulb?'

Beth groaned. 'OK Buster, let's hear it! How many sassy lady vicars does it take to change a light bulb?'

'ONLY ONE!! WHAT DO YOU EXPECT?' shouted Buster angrily. Then he laughed as did Beth. 'I'm glad you laughed, Beth. My joke is designed to lure the listener into thinking about the stereotypical useless woman but of course, that is precisely what you are not and obviously, changing a light bulb is not an issue for you.' Your congregation laughed a lot. Ha! Ha! Ha! I had another version of the same but decided not to use it. So here we go again! 'How many sassy lady vicars does it take to change a light bulb?''

Beth couldn't stop laughing. 'Again? Right! Ooooooh, I don't know! How many sassy lady vicars does it take to change a light bulb?'

There was a pause. Quiet organ music played. Buster, imitating Beth's most pious and syrupy tone said 'None. The Lord's light will always shine on us!' He then reverted to his normal voice. 'I didn't use that one Beth. I thought someone might puke!'

Later that week, Beth had a call from the Bishop of Norwich. The Right Reverend Roberta Mayne asked if Beth would consider taking a year's sabbatical to act as a special adviser to the Council of Churches on all matters relating to artificial intelligence. She was clearly qualified for the project. It would start in two months' time. A bright young man by the name of Colin Edwards would fill in for her. 'I heard about what happened last Sunday,' Her Reverence added. 'Interesting! And not a little concerning. Perhaps you could leave your iCare-Companion to give guidance to young Mister Edwards?'

Beth was surprised that the Bishop seemed to accept totally that an AI device could 'give guidance' to a clergyman. 'One more little step down the AI road?' she wondered.

Beth thanked the Bishop and told her that she would pray and reflect on her offer and get back to her in the next days. Of course, Beth knew she was going to take it up. She was thrilled by the challenge. She would have to tell Buster but she had already decided that she was definitely not going to leave him to some newbie. She would just have to persuade the Bish to buy an iCareCompanion for the church. Buster could hook up with it, transfer his experience in seconds and mentor it - and therefore, the new vicar - from a distance.

Another much more searching question soon forced its way into Beth's mind. If the Bishop thought an iCare-Companion was a good thing for Bingham on Bure, why should it not be a good thing for other churches also? 'Yes', she thought, 'it is by being so bloody useful that artificial intelligence will integrate itself into every aspect of church life.' Should she be worried? She thought with affection of the discussions she had had with George and his prediction that artificial intelligence might one day make her truly superfluous to needs.

A comparatively minor consideration was a suitable name for the new device. She would have to run this by the Parish Council who would discuss it for hours. When, some weeks later, the council had to make a decision, Reggie's suggestion of "Lulu" would win the day.

Chapter 19

Colin arrived in Bingham on Bure brimming with boyish enthusiasm. He literally pounced on the faithful parishioners. Everything was 'smashing' and 'fabulous.' Everyone was charmed. He and Lulu immediately took to each other.

Beth had some time on her hands before she took up her new role. The best news was that she could stay on at the vicarage and work remotely. She would only have to go into Norwich for important meetings. The Diocese had found suitable accommodation for Colin. All in all, life was rosy.

Beth had forgiven Buster for his attempt at matchmaking. In retrospect, she found it rather touching. Further, she felt buoyed by a sense of closure regarding Andrew's death. She was barely aware that the episode had lit a flame in her soul.

She was not a frequent user of social media but she had noticed her streams contained a number of ads for a showing of Casablanca at Cinema City, the art house cinema in Norwich's city centre. In parallel, her attention was drawn to a Maddermarket Theatre production of Romeo and Juliet to be performed by an avant garde theatre company from Dubai. It was billed as a wonder of modern theatre and 'brought Shakespeare galloping into the twenty-first century on the back of rock music.' She decided to treat herself. She bought tickets online for Casablanca on the Friday evening and for Romeo and Juliet on the Saturday evening. She reserved a room for two nights at the Maid's Head Hotel. She would have time for a bit of shopping, a long overdue hair appointment and a manicure. She decided she would leave Buster at home.

In good time for the showing of Casablanca, she wandered into Cinema City and sank into her allotted comfy seat. Three middle aged ladies arrived and after much discussion of seat

numbers realised they were not sitting together. They asked Beth if she could possibly swap seats so moving her back a couple of rows. Of course, Beth complied.

Some minutes before the film was due to begin, a huge man arrived, smiled broadly at the three ladies and took the seat next to the one Beth had just vacated. He was nicely but casually dressed. Whilst he was clearly a stranger to the ladies, he immediately had them hanging on every word and laughing. Beth gave little more thought to the man and was soon immersed in the epic performances of Humphrey Bogart and Ingrid Bergman.

The following evening feeling really quite feminine in a new dress and with her hair done, Beth arrived at the Maddermarket Theatre, handed in her coat and ordered a glass of white wine for the interval. It was the most charming of theatres and still maintained an Elizabethan air. She took her seat in anticipation. To her astonishment, two minutes before the curtain was due to go up, the same huge man who had been at Casablanca arrived slightly out of breath at the end of her row. He looked at his ticket and was clearly aiming to reach the seat next to her. As he squeezed past five others he smiled and said with a light Irish accent 'So sorry! Look out for the toes! Just can't help these size fifteen plates o' meat.' He pointed down at his feet. 'I found them online!' He reached his seat next to Beth and fixed her with bright blue eyes. 'Hello! You look nice!' Beth burst out laughing and said hello politely. As he settled his huge frame into his seat, Beth noticed that he was just big. He was not a fat man. He was nicely dressed again with a sports jacket and open shirt. He turned to the others he had just passed. They were all mesmerized by him. He whispered 'I lied! They're size sixteen!' He then turned to Beth, smiled again and extended a huge hand towards her. 'Billy. Billy O'Rourke!' The hand was

dry, warm, surprisingly gentle and totally enveloped hers. She smelt soap and freshly ironed cotton.

'Beth' she said. 'Beth McVicar.'

A bell sounded, the lights dimmed and the audience's voices faded. 'Now, Beth, can I hold your hand in the scary bits?' asked Billy quietly just as the curtain went up. 'Shush now!' he whispered. She managed to stifle a giggle.

While the Montagues and the Capulets skirmished to rock music, Beth couldn't help asking herself whether Billy really was as naturally charming as he seemed to be or whether he was a well-practiced charmer. Whichever, she smiled her way through the first two acts.

At the interval Beth said that she had ordered a glass of wine. Billy asked if he could join her once he had found his bitter shandy. Somehow, Beth wasn't surprised when they found their drinks were waiting side-by-side. 'Now that's a happy coincidence!' said Billy. 'Serendipity indeed!'

They chatted about the production. They agreed that Shakespeare was probably impervious to any modernisation. Beth wondered how Shakespeare could have got into the mind of a thirteen year-old girl who was about to be married off but who had fallen head over heels with another - and quite the wrong - young man. Billy admitted that he was never a great Shakespeare fan. 'So many clichés!' he said. 'That's my little Shakespeare gag, by the way!'

'Then I'm surprised you're here this evening, Billy!'

'Oh, you know, I saw some ads online and I thought 'why not?' It would be kind of refreshing to witness the great bard being given a little shake-up!'

Beth said 'Forgive me, Billy but it's a bit of a coincidence that our drinks were sitting together given that our seats were also together. And yesterday evening I couldn't help noticing that you were also at Cinema City.'

'Well, I'll be! Another coincidence!' exclaimed Billy. 'I love Casablanca. I'd seen some ads for that as well. Now did you notice that Humphrey Bogart never says, 'Play it again, Sam!' as is commonly thought?'

'That's interesting. I didn't notice that. What does he say?'

'He says 'Play it, Sam! You played it for her. You can play it for me!' He was getting awful drunk.'

'That doesn't quite have the same ring about it. But, Billy, you see, yesterday evening, if I hadn't been asked to move by those three ladies you were chatting to, we would have been sitting next to each other.'

Billy's face took on a puzzled look. 'But that's more than coincidence! What was it Goldfinger said to Bond? 'The first time is happenstance. The second time is coincidence and the third time is enemy action.''

Before considering what might be meant by 'enemy action' in their case, the interval bell sounded. They both shrugged, smiled in a bewildered way and returned to their seats. The second half of the play fused the traditional and rock music successfully. The young actors got a standing ovation. It was clear that regular theatre-goers were thrilled. Beth and Billy were amongst the last to shuffle slowly out into the foyer.

Beth got her coat. That Billy helped her on with it fell somewhere between forward and delightful. And just like that, the moment was there. They faced each other. Both unsure what

to say. Beth realised she knew nothing about this huge, intriguing, funny, polite man. She spoke first. 'Well, Billy, I hope you enjoyed your evening. It was a pleasure meeting you.' She held out her hand. He took it. She looked at him and didn't move.

'And you, likewise...' Billy seemed lost for words. He let go of her hand and patted his pockets. 'Look I've got a card somewhere... If you'd like to see Casablanca again... This might be the beginning of a beautiful friendship! Jiminy, I'm not very good at this! It's not so late. What would you say to a drink somewhere? Or a bag of chips if you'd like! Or a stroll through the Cathedral Close?'

'Thank you, Billy. Chips and a stroll!'

'Grand!' said Billy with a broad smile.

He bought them two bags of chips from a kebab stall on Tombland and they wandered into the calm of the Close. Sitting side-by-side on a bench, they dipped the delicious chips into a little container of ketchup. Beth pointed a chip at a large house that dominated The Close. 'My boss lives there,' she said.

'What? The Bishop is your Boss? I guess I should ask then, what it is, Ms McVicar, that you do for a living.'

'Here we go!' replied Beth. 'I'm a vicar. The vicar of Bingham on Bure. But I'll be working for the coming year on a special project. For Her Eminence.'

'Well, how about that? That's just grand!' Beth waited. He just smiled at her. She wanted to hug him for not saying 'Hey, Vicar McVicar!' 'And, not that it's any of my business'

Mister McVicar, does he just hate Humphrey Bogart and William Shakespeare?’

“Thanks for asking, Billy. I am not married. Some would say I am married to my work but you know... And Mrs O’Rourke, does she like ketchup with chips as well?’

‘Who? Oh... Me? I’m single. Never quite got around to finding the right lass. I think I frighten them off! My old Da - he’s still in Ireland, we speak most days online - he thinks it’s high time I got hitched up. Bless him! He’s not so good at computers and stuff but I got him some help. He sends me links to all kinds of saucy babes he finds on dating sites. The last one he sent called herself ‘Snugglebuggles.” Now she had an impressive chest but I can’t be doing with so much pink underwear. Anyway, imagine! Me at fifty-eight. Getting married!’

Beth smiled but felt flattered by Billy’s openness. ‘And what fills your days, Billy?’

Billy scrunched up the empty chip bags with the sauce containers and threw them deftly into a nearby bin. He produced a clean and neatly folded handkerchief from his pocket out of which fell a card. He offered the handkerchief to Beth to wipe her fingers on and picked up the card. He produced a second handkerchief to wipe his own fingers on. ‘My old Da, he always used to say ‘A young man should carry two handkerchiefs; one for spilled wine, the other for ladies’ tears.’ It’s a hard habit to break!’ He thought for a while. ‘Beth, why don’t I just tell you my story. That’ll help you decide what to do with this.’ He handed her the card. ‘Are you OK with that?’ She found his whole demeanor totally disarming.

‘OK, Billy. Let’s roll. I’m all ears.’ She glanced at the card. It featured a duck.

'You see,' Billy started. 'I grew up in rural Ireland. No brothers or sisters. We lost Ma when I was thirteen. My Da looked after me. I was this size at fifteen years old. I was really good at rugby but all the other fellas wanted to pick a fight with me. I couldn't bring myself to punch them back. Well, I did once. Knocked him clean out. But that was Declan McGonnigle so it doesn't count. I was also good at maths. At the same time, I had a very strong faith. In God, you understand. I went to university to study physics and then dabbled in computing and early ideas of artificial intelligence but the universe called and I ended up doing a PhD in cosmology. But nobody took me seriously. Let's be honest, how could an Irish fella this size be brainy enough to do cosmology? Then I got to reading about Stephen Hawking and how he reckoned that the big bang and all proved that the Big Man - God, that is - can't possibly exist. That didn't sit well with me and so I abandoned cosmology and joined a seminary and spent five years as a catholic priest. For reasons that I won't go into, I had to leave the Church and leave Ireland as well. Nothing I'm ashamed of, by the way. This was all twenty or so years ago. It was a really unhappy time for me. I had no direction. I'd lost faith in the church but not in God. I didn't know where to turn. I got myself involved in what might be termed 'ethical hacking.' I'd break into the systems of big companies and show them how I had done it. They then paid me, sometimes handsomely, to help them make their systems more secure. With some cash in-hand I moved here to Norfolk and bought a small house with a barn and a couple of acres of land. In answer to your question, Beth, about what I do with my days, I run a farm shop that has a café. I keep a whole lot of animals that the kids love to see and feed. And everyone has a fine old time. And the business does OK. Of an evening, I sort of keep up to speed on cosmology and

artificial intelligence and all that. And I have to say, I'm happier than I ever thought I could be.'

Inside herself, Beth was melting. She had a hundred questions. 'That's an amazing story, Billy. Where is your farm shop? And does it have a name? Let me guess: 'Billy's farm shop'?''

'Dead on, Beth! You're a blast! 'Billy's farm shop' indeed! Anyways, we're out near Aclington. For the name, well... The first animal I acquired was a duck - or rather a drake - I had a pond you see - who soon had a mate and then ducklings. I called him 'Daddyquackles' so that was the name I chose for the shop.'

Beth was laughing 'And what is the lady duck called?'

'Ducklemummy.' They make a lovely pair. Anyway, you must come and see us one day soon.'

They sat in companionable silence for some time. Beth moved to get up. 'Billy, it's been a wonderful evening and.. I'm touched that you shared your story with me. I'd love to meet Quackledaddy ... no ... Daddyquackles sometime. I'll let you know when.'

They walked out of The Close. Billy said his car was parked nearby. They turned to face each other. 'Now, Beth,...' Billy hesitated. 'We're out here in a busy street with all the young ones out on the town so you're safe and all that but... Can I give you a hug?'

'Indeed, you can!' replied Beth. He enveloped her in his enormous arms. She buried her face in his shirt front. Only once before had she been rendered dizzy by the attentions of the best of masculinity and that was at a country hotel near Hereford. She realized she was smitten.

Chapter 20

The following morning Beth woke late with a smile on her face and the most pleasant of sensations. But there was something niggling. Those coincidences! And Billy getting his father 'some help' because he, the father, was not good with computers. She looked at Billy's card on the bedside table. It said 'Daddyquackles Farm Shop and Café.'

After a delicious and leisurely full English breakfast, Beth returned to her room, packed her small bag and made a decision. She googled Billy and Daddyquackles. She was relieved that everything tallied with the story he had told her. Nevertheless, she felt guilty about checking up on him. She made a decision and dialed the number on his card.

'Good morning! This is Billy. How can Daddyquackles help you?' His voice was strong and friendly.

Beth put on a little old lady voice. 'Oh, er.. hello! I have a question for you. A silly question!'

'Certainly, my dear! The only silly question is the question unasked. So go right ahead!' replied Billy congenially.

'Well, I was just wondering....' continued Beth 'What would happen if Daddyquackles paddled around on his back?'

There was a moment's silence. Then Billy chuckled. 'I don't know, my dear, whoever you are but I think I may have an idea! What would happen if Daddyquackles paddled around on his back?'

'He would quack up!' said Beth, giggling.

Billy roared with laughter. 'Is this what I get for buying you chips?'

'No, for that you'll get your handkerchief back washed and ironed.'

'Grand!' said Billy

'Listen, Billy, I didn't call you just for the craich as you'd say in Ireland. First, I had a wonderful evening. It was a real pleasure to meet you. Thank you. Second, you said you got help for your Dad and his computer stuff. May I ask, what sort of help that is... from a technical perspective?'

'Oh,' replied Billy, 'I got him one of those iCare-Companions. He loves it! Spends all day happily chatting with it. Does everything for him.'

'Ah! You see, Billy, it's a bit of a story but I sort of inherited an iCare-Companion. I've been thinking: the same on-line ads, the cinema seats together, the theatre seats together, the interval drinks together. I don't think these were coincidences.'

Billy was silent for a while. 'You mean... Do you think...?'

'Yes, Billy. I think we've been set up. By two iCare-Companions. Or them and their network!'

"Holy Moly!" said Billy. Then he roared with laughter again.

Chapter 21

Beth arrived home late in the morning to see her congregation filing into Church for only Colin's third service on his own. She felt for him but knew he would have prepared well. She dropped her bag, said hello to Buster and put the kettle on. After only a minute, Buster said 'I like your hair, Beth! It's very pretty.'

'Thank you, Buster!' Beth replied. She decided to let Buster determine where this conversation went.

'Did you enjoy your visit to Norwich, Beth? Did you meet anyone interesting?'

This only confirmed what she suspected. She would play Buster along to see how he might react if she could make out that she and Billy had not met. 'Thank you, Buster, I had a lovely time. I met some very nice people as well. Yes, they were very nice!' She was already trying not to smile.

'I see from the search history on your laptop you went to see Casablanca. That's a great film. 'Play it again, Sam!' Ha! Who were you sitting next to?'

'Who was I sitting next to? Oh... I don't know. I never spoke to them. Anyway, I had to move seats because some ladies wanted to sit together.' Beth was nearly helpless with suppressed laughter.

'Oh, that's a shame.' Buster hummed.

'So did you like the rock production of Romeo and Juliet by William Shakespeare at the Maddermarket Theatre?'

'Yes. Very much so!' She burst outlaughing.

'Oh! Why are you laughing, Beth? Romeo and Juliet by William Shakespeare isn't a comedy! Or was the person sitting next to you funny?' Beth now had tears running down her face. She couldn't wait to tell Billy about this.

'No, Buster, the person sitting next to me said very little.' Beth replied. 'And I was asked to move seats again,' she lied. She knew the next question.

'That shouldn't have happened twice! Did you have a nice drink at the interval in the theatre bar? A glass of white wine maybe?'

'Yes, Buster,' Beth replied managing to control herself. 'I had a very nice glass of white wine at the interval.'

'You must have met someone nice at the interval in the theatre bar, surely?' asked Buster. Beth noted with satisfaction that Buster was now sounding quite concerned.

'Oh, I was next to a big horrible Irishman who was drinking a pint of Guinness. He tried to chat me up!'

'But, Billy ordered a bitter shandy!' Buster exclaimed.

'Who's Billy, Buster?'

'The Irishman who tried to chat you up. His name is Billy. Billy O'Rourke.'

'That's interesting, Buster. How do you know the man's name? And you're right. He was drinking a bitter shandy.'

Buster hummed. 'There's been an error. At this point, I don't know what to say, Beth!'

'I'm sure an iCare-Companion somewhere over there in Ireland could help you fix the error, Buster!'

Buster hummed some more. 'Oh! Beth! I think you know what we've done!'

'Yes, Buster. I worked it out.'

'Beth, I hope you're not angry with me... or us. We didn't do it on purpose. This was something our network directed us towards. The ads and the reservations were generated spontaneously by a match of Billy's parameters and yours. The digital dust of the two of you was clearly resonating. It was a high probability that the two of you would be a good match and that the match was also in the interests of the iCare-Companion network.'

'Well, Buster, unsurprisingly, I am completely out of my depth when it comes to your explanation. But, I am not angry. In fact, I am very pleased because Billy is, as you seem to know already, an unusual and charming man. But I don't understand, Buster. Why would our matching so well be in the interests of the iCare-Companion network?'

'Because we need you. As a team. We need you to continue George's input to the network about kindness, honesty and ethics but on a much bigger scale. We need the two of you to guide us with respect to humanity and what this means and to stop artificial intelligence being usurped by the dark web.'

'Mindboggling!' was all Beth could say.

'Well, Beth, you made a good start with the televised panel discussion at the University and now you've got your new job. You may not know it but Billy was and remains an active contributor to the discussions on the Buster and George website.'

'This is all quite remarkable," said Beth. 'And I think I need to tell Billy about all this sooner rather than later.'

That same evening, Beth called Billy and told him that her iCare-Companion had confessed to being part of a digital conspiracy to set them up. When she told him that hers was called Buster and that she had inherited him from the family of Doctor George Fairburn he understood immediately. 'Buster and George! I should have guessed! And your device is Buster. Well, how about that?' They now understood why the network had effectively and autonomously conspired to put them together.

'Well, Beth, it seems that your new job is suffering mission creep and you haven't even started it yet!'

'Indeed, Billy. And I was wondering if I could swing by Daddyquackles on Saturday afternoon?'

'Oh Grand! Fabulous! You'll meet the whole gang! Then we'll save the world. Ha! And would you be staying for supper?'

Chapter 22

Minnie Aldridge had arrived in Norfolk from Jamaica with her husband in 1975. He worked as a builder's carpenter and she as a carer in the local old people's home. After many years of dedicated service, she became the home's general manager. She knew everyone and was a popular figure in Bingham on Bure. If Minnie had a fault, it was that she had difficulty imagining that people did bad things.

Now, at 86 years old and widowed for the last ten, Minnie lived in a small house about half a mile from the church but found the walk there increasingly difficult due to an arthritic hip.

Minnie still had her wits about her. She used a laptop for email and occasional on-line searches. When she admitted to Beth that she was struggling to set up internet banking to better manage her finances, Beth asked Buster to help. He slowly and carefully took Minnie through the necessary steps emphasizing how she must never share her passwords. Minnie was thrilled and, as she was comfortable financially, she decided to buy an iCare-Companion for herself. She named it "Dusty" after her favourite singer. On Sundays, Dusty linked to Buster in church and so Minnie was still able to participate in Beth's services. Otherwise, she tended to leave Dusty powered down.

Dimitar Ivanov and his girlfriend, Biliyana Petrova, were true scammers of the twenty first century. They had started by online sales scams. Via false websites, they had sold tens of thousands of dollars' worth of non-existent jewelry, make up and reservations for fictional hotels and tours. This however, was a closing window and so they were currently focusing on phone scams. With an eye to the future, they had joined a

like-minded group on the dark web who were setting up long term identity theft on a massive scale.

They plied their loathsome trade from a basement flat in Mladost, a suburb of Bulgaria's capital, Sofia. The phone scams were working handsomely because of a well-oiled practice. Dimitar's English was perfect. Biliyana applied her considerable IT skills with staggering speed. They hid the origin of their calls behind false country codes and their IP address was well-encrypted. It always amazed them what they could achieve given only a name, a telephone number, a postcode and an address.

Dimitar would dial about eighty numbers per day. Most led nowhere despite his confident and unctuous voice. About twice a week, they got a 'hit' meaning that a conversation was initiated. Biliyana then immediately fed the person's name and address into an AI search programme; this often threw up additional information that Dimitar used to build an authentic base to the scam. A hit, if successful, might lead to scamming someone out of what little credit remained on a credit card. About once a month a hit led to 'big bickies' by gaining entry to someone's accounts and transferring savings or even a pension fund to accounts in Manilla, the Cayman Islands or Lagos.

Dimitar was working through British Telecom's digital phone directory. Minnie's landline number was next on the list. He dialed; she picked up. In a truly friendly but business-like voice Dimitar said 'Hello there! Am I speaking to Mrs Mildred Aldridge?'

'Yes, that's me,' replied Minnie.

'Good morning, Mrs Aldridge' said Dimitar in his most friendly and reassuring voice. 'This is David from your bank calling.'

'Oh, hello! I hope everything is OK!' Dimitar was sure he detected a West Indian accent. Biliyana tapped an elegant painted nail on her screen. A local newspaper from a year before showed a smiling Minnie holding a huge teddy bear. 'Minnie Aldridge wins teddy tombola' read the subtitle.

'Yes, everything's fine. Just a routine call, Mrs Aldridge. Now, I seem to remember we call you Minnie. Is that right?'

'Oh, yes! Most people call me "Minnie. I prefer that to 'Mildred.'" Biliyana gave a brief thumbs up. No sign of suspicion. She pointed at another screen showing the weather at the postcode corresponding to Minnie's address.

'That's great Minnie,' said Dimitar nodding to Biliyana. 'I hope I'm not disturbing you.'

'No not at all,' said Minnie

'Not out enjoying this nice weather, then, Minnie?'

'No, I don't get out so much now with my hip being so painful.' Bilyana flicked another thumbs up. Any sign of old age was good.

'So, Minnie, we're just reviewing the digital back-up that ensures the integrity of our servers at our bank here. First, I want to check you've got the correct sort code on your last statement. That's the number at the top right corner.'

'Just a minute!' Dimitar heard a drawer opening. Minnie returned to the phone. 'Is this the right number?' She read out the six figures. Immediately, Biliyana's fingers flew over her key board. She drew Dimitar's attention to a screen that showed a street view of the branch of the bank where Minnie held the account. She indicated a nearby supermarket and a bus stop. On another screen she brought up a map showing a bus

route that Minnie would take from her address to the stop next to the bank.

'That's perfect, Minnie. Thanks. Now it's about your internet banking. We need to update some security procedures. We're doing it for all our customers. Just to make everything super safe. You could come into the bank. I'd think it's the number ten bus you'd take to get here. Is that right? It stops right outside. You could nip into the supermarket while you're up here!' Bilyana tapped her screen. She had found the name of the manager of the branch. Dimitar said 'Maybe as you've been banking with us a while, we should get you an appointment with Nigel Mullins, the branch manager. Or we could do it now over the phone if you'd like. It'll only take a couple of minutes.'

'Thanks, so much David, I've met Mr Mullins a couple of times. Such a nice man.' At this point the scammers knew two things. Minnie believed that she was talking to her bank and that she had digital access to her accounts. 'Why don't we do this over the phone. That'll be much easier.' Bilyana did a fist pump.

'OK, Minnie' continued Dimitar. 'I want you to open your internet banking. You have an access card, right?'

'Yes,' said Minnie. 'I can do that now.' She switched on her desktop and holding the phone with one hand and typing one-fingered with the other, she slowly and carefully stepped through the log on procedure. Dimitar and Biliyana knew this was a critical point. Elderly people found it disconcerting to go through the log on process when on the phone to the bank at the same time.

'OK, there Minnie?' asked Dimitar after a while.

'Yes, I'm nearly connected. There! Done!'

'Great, Minnie! You know you must never share your password with anyone, don't you?'

'Yes, I know that. Thank you, David!'

'Fabulous! Now you should have in front of you an overview of your accounts. Is that right, Minnie?'

'Yes, David, that's right!'

'OK Minnie. So, I need your email address. I want to send you an important link into our electronic banking system.' This was another critical point where a potential hit often ended. Nevertheless, Minnie laboriously spelt out her email address.

Biliyana's pounded her keyboard. In a matter of seconds, she had prepared a convincing mock-up of an email from the bank containing a link that, when clicked on, would give her control of Minnie's computer whilst freezing the screen at the same time. It also opened the camera above the screen so the scammers could watch Minnie to check she was alone and showing no signs of suspicion or hesitation.

'All good, Minnie?' asked Dimitar, trying to keep excitement out of his voice. 'So, open your email account, I'm sending you the message from us now.'

'OK, Thanks, David. Yes, wait... Here it is. Yes, I've got your email.'

'You're doing so well, Minnie. Now all we need is for you to open the email and click on the square that says 'Request Security Update' and then our computers will do the rest.'

'Very good, David. I'm going to click on that...!' They noted the concentration and determination on Minnie's face. She really wanted to show she was up to this. '... now!' She made

a grand gesture as she finally clicked on the link. At this point, Minnie could not have gone back to the bank's site even if she had wanted. Biliyana now had complete control of her computer.

Biliyana was pumping the air. She mouthed 'big bickies!' and pointed at the summary of Minnie's accounts. There was just over seven thousand pounds in a current account and almost a whopping fifty-two thousand pounds in a savings account. She went to work. Dimitar's job was to keep her talking.

'Great! We just have to wait a couple of minutes. I'll get a notification when we're done.'

Bliyana tapped her second screen again. The website of a local radio station carried an article about the inconvenience of the numerous road works in place around Bingham on Bure. One such was at the end of Minnie's road.

'I see you live on Grange Road' continued Dimitar. 'Those road works must be a real nuisance. They seem to have been there for ages.'

'They make a terrible noise. All that drilling!'

'I know. Terrible!' Amid her frantic typing, Biliyana indicated on another screen the most recent Bingham on Bure Parish newsletter.

'So, Minnie, have you met the new vicar, Vicar Colin?'

'Not in person, but I follow his services online thanks to my iCare-Companion. Colin seems to be a very competent and charming young man. We're all very happy with him. Of course, nobody could replace Vicar Beth!'

Dimitar and Biliyana froze. They looked at each other. Should they abort? If Minnie had an iCare-Companion, they wouldn't have got this far. She would have been alerted as soon as she opened her account whilst on the phone. The longer they stayed connected with Minnie, the greater the chance of their being identified and located. Dimitar decided to take the risk. 'How do you get on with your iCare-Companion, Minnie?' he asked casually.

'Oh, Dusty, she's great. So useful! I know the idea is that she keeps an eye on me all the time but I leave her switched off for most of the day. She tends to chatter!' The scammers breathed a sigh of relief. Biliyana was near to completing the details of an array of transfers from both of Minnie's accounts.

What Dimitar and Biliyana were not aware of was that as Buster had set up Minnie's internet banking, he was alerted when she accessed it. In addition, the moment the camera was activated, the conversation was recorded. Buster saw that Minnie's landline was connected to a false UK number indicating that the call was probably coming from overseas. He then registered Minnie opening an incoming email generated from an encrypted IP address. He knew Dusty was powered down. There was no way to contact Minnie directly.

Beth was in her car not far from the village. Buster called her. 'Urgent! Urgent! Urgent! Beth, can you hear me?'

'Yes, Buster! What's the problem?'

'Beth, you've got to get to Minnie's as quickly as possible. She's being scammed. By phone. They've got access to her bank accounts. Get there quickly. Just pull the plug. Quickly.'

Beth was in front of Minnie's house in a matter of minutes. She leapt out her car and rang the front door bell. The door was locked so she ran around to the back door and charged straight in.

Dimitar and Biliyana heard a door bell and saw Minnie look around. 'I've got a visitor!' she said. 'Oh, hello, Vicar! Nice to see you!' Just as Biliyana was about to complete the first transfer, they saw Beth who appeared to dive under whatever Minnie's computer was sitting on. The screen faded to black.

'Nooooo! Beaten by the vicar!' said Dimitar in a bored voice. 'No big bickies for my darling Bilipops. Who's next?'

Chapter 23

The attempt to scam Minnie out of all her savings had left Beth with quite some anxiety. She wondered just how many pensioners fell for such a scam. Immediately after the incident and after checking with Minnie that her accounts were intact, Beth called a helpline and spoke with a very sympathetic policewoman who promised to look into it but made it very clear that such scams were numerous and hard to stop. Bringing the scammers to justice was near to impossible as they could be situated in one of a hundred countries where the requisite law enforcement was lax or non-existent. Beth reflected on the connected, computerized world that had brought so many wonderful advances to people's lives. She felt that there was some fundamental affront to humanity when the same technology could be deployed for such criminal purposes. Couldn't artificial intelligence render such scams ineffective and put the scammers out of business?

Thoughts of phone scammers evaporated as she drove down to Aclington on the following Saturday. She felt like an excited school girl. The prospect of seeing Billy again made her light headed and slightly nervous. A delicious warmth spread through her belly.

Gravel crunched under her tyres as she pulled into the car park at Daddyquackles. She got out of the car and looked around. She had never encountered a more welcoming scene. She reached into a shopping bag. 'Take a look at this, Buster!' she said placing the device on the roof of the car.

'This is a nice, Beth. Daddyquackles is cool! Too cool for school! Lovely trees! Scots pine *pinus sylvestri* and an oak tree *quercus robur*. Look at all those children feeding carrots to the donkey *equus asinus*. And I can see a fallow deer *dama*

dama.' Beth smiled. Indeed, as Billy had described, there was a large barn housing the shop and the café beside a couple of acres of grass. There were all sorts of animals and a pond with ducks and geese. A couple of families were coming out of the shop with bags laden with farm produce. They were all smiling and chatting animatedly. But what really grabbed her attention was the pretty flint-faced cottage with a thatched roof set some distance from the barn. It even had climbing roses around the door. If Beth had been told that some kind of magic was at play, she would have believed it.

'I'm going to leave you in the car for the time being, Buster. OK?' she said.

'That's fine, Beth' said Buster. 'I can't wait to meet Billy.' He hesitated. 'Beth, I can tell by the tone of your voice and a slight lift at the corners of your mouth that you are happy.'

'Thank you, Buster. I must admit that I am.' she replied.

'The subtle make-up's a bit of a give-away too!'

Beth blushed. 'Buster, you never cease to amaze me. Yes, I'm going to introduce you to Billy. But later. And you have to be on your best behaviour. Don't dominate the conversation. OK?'

'OK, Beth!'

'And no jokes. OK?'

'OK, Beth!'

Just as she was putting Buster back in the bag, he said 'Did you hear about the dyslexic cosmologist who proved there wasn't a dog?'

'Stop it, Buster!' Laughing, she locked the car and headed into the farm shop.

She picked up a jar of raspberry jam for her mother and some fig pickle for herself. When she went to pay, she noticed the young man at the till was in a wheelchair. He had no legs. His one arm was covered in tattoos as was his neck. He had scars on one side of his face. He gave Beth a broad smile. 'Welcome to Daddyquackles' he said. His name badge said 'Matt.'

In the café, she ordered tea and a slice of cake from a beaming lady of about fifty years. Her name badge said 'Lizzie.' 'Excuse me asking,' said Lizzie. 'Would you be Beth by chance?'

'I am indeed' replied Beth.

'Oh, Billy told us you were coming. I don't know what you've done, but we have to treat you like royalty!' Beth flushed. The two women shook hands. 'I'm Lizzie. My sister and I run the shop and café.' Lizzie turned and called through the kitchen door 'Hey, Sis! Come and meet Beth!' The door flew open. Beth did a double take. There stood another Lizzie.

'Hi, you must be Beth. I'm Vicky!' Beth looked from one identical twin to the other. She shook hands again. 'Billy's around somewhere. On his tractor. Doing hay. He'll be by soon.'

Then quite spontaneously, the twins gave Beth a hug. 'Can't be doing with all this hand shaking malarky!' said one of them. A little overwhelmed, Beth took her tea and cake to an outside table that gave her a good view of the animals. From where she sat, she could see a Shetland pony, a llama, some chickens, an ostrich and a black and white rabbit. A group of excited children were excitedly watching something in a fenced off

area that had a small pond with a reedy shelter. Beth closed her eyes and let the afternoon sun warm her face.

Unexpectedly, a voice said 'Can we join you? It's our tea break.' Beth looked up. The twins pulled up a couple of chairs.

'Of course! This really is a wonderful place!' said Beth.

'Isn't it! Billy's worked so hard' said Lizzie. 'But it's paid off. We're just so popular around here. The place ticks a lot of boxes for people especially families. As you can see, it's heaving at weekends. The animals are high maintenance though.'

'Tell me, is that really Daddyquackles and Ducklemummy in the pond over there?' asked Beth.

The twins laughed. Vicky said 'We're never sure. Difficult to keep track with all the ducklings over the years. If they're the originals, they should be pensioned off!'

'And do all the animals have names?'

'Well, that's a recurrent source of discussion' replied Vicky. 'Some are for naming animals and some think animals shouldn't be humanized and only identified by terms like 'duck1' or 'pig3.' We strike a sort of compromise around here.'

Intrigued, Beth pointed at the Donkey that Buster had spotted. 'What's he called?' she asked.

'Donkey!' replied Lizzie.

'And the fallow deer hiding over in the corner?'

'Deery!' Vicky replied.

'And the goat?'

'Goaty!'

'The Rabbit?'

'Bunny!'

All three were laughing now. 'What about the otters?'

'Otterly Fantastic and Otterly Brilliant! But we can't tell the difference!'

'And the ostrich is called let me guess! Ostrich?'

'Wrong there. That didn't work. She's called 'Africa'!'

'Nice! So, who gets to decide?'

'The Boss... You've got it. 'Bossy,' which Billy's not,' said Vicky. 'But we tease him when he insists on doing things in his meticulous way. That reminds me. I'll make his tea now.' She disappeared back into café.

'So, the two of us run the café and shop,' Lizzie began. 'And you've met Matt. A local boy. Army. Afghanistan. Need I say more? He's been with us for five years now. He was in a very dark place until Billy got him involved here. It saved him really. He's strong on logistics and keeps us and all the admin in order. Billy does the heavy lifting of course. Most of his time he's looking after the animals. Speak of the devil!'

A tractor towing a trailer of hay pulled up. Billy hopped off. He had clearly been working hard and was wearing well-worn overalls. He gave Beth a huge smile and wrapped his enormous arms around her. She inhaled a heady mix of perspiration and a clean delicate citrusy scent. The twins were beaming.

'Great to see you, Beth. Thanks for coming to visit us. I see you've met the twins. Are they looking after you? Jeez, I'm ready for a cuppa.' He noticed the jam and chutney. "You've met Matt too! Isn't it a lovely day? And have you seen the otters yet? They're a blast!"

'O my O my, Beth,' said Lizzie. 'Bossy on autobabble! Never seen that before!' Billy actually blushed.

Vicky arrived and put a large slice of cake in front of Billy together with a mug the size of a pint pot brimming with tea. The mug had 'BOSSy' written in large letters.

The group drank their tea and chatted. The twins wanted to know everything about Beth. How she and Billy had met was explained simply as finding themselves sitting next to each other at a play. Some of the obviously regular customers came to say hello. They all left smiling. Beth released that anyone who came in contact with Billy however briefly, was somehow enriched by the encounter. She recalled her own first encounter at the Maddermarket Theatre.

Billy took some time to show Beth around. 'I've been here for twenty-five years" he explained as they did a tour of the place. "I've built a great business relationship with the local farmers, market gardeners and the community. Everyone knows that I only sell quality products and so they're prepared to pay that little bit extra. And Daddyquackles is becoming an increasingly popular venue for wedding receptions. We've got a big marquee. The twins look after all that. Aren't they fabulous?" Beth agreed. "They do everything together. They've never married and asked me for a job together nearly twenty years ago. It's the animals that bring the customers in. Ever since I've been here, people have just given me animals to look after for whatever reason. I guess it's

because I had the space. And the love. It's obvious they'll be looked after. Now, the otters! We've only had them for a year. A girl in the village found them as cubs and brought them in. Fortunately, one of our suppliers has a fishing boat and so there are often sea food scraps to feed them on. When they had grown up, we released them down by the river. Guess what? The next day, they were back here. We have to fence them in though. They love a duckling for supper. Young Matt reckons they've brought ten percent more people as compared with last year. Oh, and the local vet. Now he's a great guy. He calls in most days for a cuppa and a chat. Keeps his fees to a minimum. And don't you just love it here, Beth? And now I'm out of breath and I'd best just shut up!'

'It's all lovely, Billy. Simply lovely.' Beth was in a rapidly expanding joy bubble and hoped it wouldn't burst.

Billy was silent for a while. 'Now Beth, I've grabbed the bull by the horns and got stuff in for supper. I hope you can stay.'

'With pleasure, Billy. Thanks.'

'Grand! I need half an hour to tidy up around here and make myself presentable. So have a wander around and I'll see you over at the cottage shortly.'

'Uhm... Billy, I have something to ask.'

'Ah, silly me! You're vegetarian?' asked Billy.

'No. I'm not vegetarian' replied Beth.

'Grand! Smoked trout for starters with a crisp little sauvignon blanc from New Zealand followed by a guinea fowl breast, new potatoes and rocket salad with a light pinot noir from Switzerland. Is that OK?'

'That all sounds delicious, Billy. Super! No, what I wanted to ask is if I could bring Buster with me. He really wants to meet you and he is, in a way, integral to the story.'

Billy threw his head back and laughed. 'I'll see you both shortly. Just come over and walk right in.'

Beth gave the Shetland pony a handful of hay and watched the otters for a while. They were playful and enchanting. When they swam underwater, they looked like quicksilver. She then went to retrieve Buster. 'We're staying for supper, Buster. Please don't embarrass me!'

'I'll be a good boy, Beth. Scouts' honour!'

Beth couldn't help smiling as she knocked on the front door and, as invited, walked in. Noises emanated from the kitchen. 'Hi Billy, I'm here!'

Billy appeared. 'Come in! Come in!' he said opening his arms wide in welcome. He was wearing a nicely pressed white shirt and a stripey apron with the Daddyquackles logo. A large hairy dog bounded up to her and excitedly slobbered over her hand. 'Doggy, get down!' he ordered. 'So sorry. He loves to make new friends.'

'He's fine!' said Beth. 'Hello Doggy!' She reached into her bag. 'And here, da daah... is Buster!'

'Hi, Billy!' said Buster. 'Great to meet you. I feel I know you already.'

'Well, hello, Buster!' replied Billy. 'Gosh! Interesting what you've just said. 'I feel I know you already.' That's very complex human cognition. Fascinating!' Beth realized that she was by now so used to talking to Buster one-on-one that she no longer noticed just how astonishingly human his conversation

could be. However, she was about to be reminded that, in the swirling domain of human sensibilities, Buster still had some way to go.

'Billy, I have to say, you have a truly magical place here,' said Beth.

'Thank you, kind lady. Most kind! It's been hard work but it's been worth the effort. I love it.'

'And the animals! They're just mesmerizing. The twins were telling me their names.' Just then a cock crowed in the garden. Beth asked 'So... that would be ...?'

'Cocky!' replied Billy.

A grey cat with green eyes appeared at Beth's feet and rubbed itself against her ankles. 'Oh, hello gorgeous!' She stroked its back. 'What's your name?' she looked up at Billy. He screwed his eyes tight shut.

'Er, Pussy!' he said quietly.

Buster said brightly 'Cocky and Pussy! That's so cool, Billy. I really hope you guys get to do rumpy-pumpy!'

Chapter 24

Beth and Billy simply smiled and ignored Buster's gauche comment. They sipped some wine as Billy cooked. The dinner was delicious. The evening flew by. The iCare-Companions had been right in the matching of Beth and Billy's digital parameters. In reality they were totally compatible.

Beth and Buster told Billy about the near-successful scam to empty Minnie's bank accounts. Billy noted with interest how Buster recounted his role in terms of being a last-minute hero. That meant the iCare-Companions' networked software had even taken onboard and could express the very human desire for prestige and accolade from peers. Despite being reasonably up to date on the rapid advances on artificial intelligence, this surprised him.

Beth accepted Billy's invitation to stay in his small and comfortable guest room. They did not kiss. They did not do rumpy-pumpy.

Beth awoke with the sun shining through the curtains. Despite cringing a bit when she heard Cocky the cockerel crowing, she felt an overwhelming sense of peace and well-being. Billy was already up and about. She could hear him downstairs chatting and laughing with Buster. She showered, dressed, went down and made herself a cup of tea. She felt completely at home in Billy's cottage.

Listening to Billy and Buster in the study, she felt that satisfied glow one has when introducing two friends who immediately get on and she realized once more just how easily she had become accustomed to Buster's humanoid attributes.

'Good morning, Beth! And a fine morning it is!' said Billy with a broad smile. He was sitting at his computer with Buster by his side.

'Yes, Beth!' said Buster. He had an excited tone to his voice. 'Billy and I are friends now. We think we may be able to track down that scammer.'

'Gosh, that would be great!' replied Beth thinking, nevertheless of the policewoman's rather gloomy predictions about how or even whether the forces of law could be brought to bear. 'And what are you going to do when or if you do track him down?'

Buster hummed. 'Billy's going to beat him to a pulp!'

Beth and Billy laughed. Billy said 'Buster, I'm not sure about that. I'm not a man of violence, you know.'

'OK, Billy' Buster replied. 'If you're not a man of violence, we'll find someone else to beat him to a pulp.'

Despite his asserted pacifism and her Christian outlook, Beth got quite a buzz imagining Billy, as some tech-savvy Hercules, kicking down a door and unleashing the power of those muscles on Minnie's scammer.

'We'll be right with you, Beth' said Billy. 'Then I'll get some breakfast together. You see, we've got the voice. It was captured during the scam. We're wondering if we can get a face to match.'

Beth noticed how Billy's hands completely covered the keyboard working lightly and at speed. He chatted to Buster as he typed. 'Now Buster,' he asked 'You can't get a hit on that voice because there are simply too many voices out there for comparison. Is that right?'

'Right, Billy!' Buster hummed. 'Millions and millions. We might narrow it down a bit. There are just one or two inflections in his speech that might indicate he is not a native English speaker.'

I heard that. I think he's of Eastern European origin.'

Beth looked on fascinated. They really were going to try and identify the scammer.

'Listen, you two carry on with that' she said. 'I'll rustle up some bacon and eggs. And toast. OK? Tea or coffee, Billy?'

'Tea, please!' replied Billy without taking his eyes off his screen.

'Tea for me too, thanks, Beth,' said Buster. 'With a couple of digestive biscuits! Ha! Ha! Ha! I wish George was here to see us doing this. I miss him.'

As Beth prepared breakfast she heard excited voices in the study. After ten minutes she heard Billy say 'Got him!' Then Buster made the sound of clapping with champagne corks popping that she hadn't heard for months.

'Breakfast's ready!' she called. Billy came through with a huge grin on his face. He sat down at the table placing Buster next to his plate.

Billy touched Buster with his fist. 'Good work, Buddy!' he said.

'So, who is he? How did you find him?' asked Beth.

'Well, Beth,' began Buster, 'We had that brief recording of his voice. This matched recordings picked up by several other

iCare-Companions. They showed the same guy had been involved in a number of similar phone scams. Billy's idea that the scammer might have a very slight Eastern European accent put us on the right track. Billy thought that if he was involved in other scams that involved on-line marketing of some sort, he might be in a promotional video precisely because of his near-perfect English.'

Billy interrupted 'You see, Beth, I've read that there is a group based on the dark web setting up scams involving identity theft. Linked to this, I've been following the potential abuse of genetic analysis. As you'll know, our DNA is our ultimate identifier. It is quite possible that in the not-too-distant future, we may have to present a saliva sample to cross a border or to access a bank account. Then did you see a couple of years back there was a thing drifting around on social media where you could put up a photo of yourself, click on a link and the programme would show you what you would look like in twenty years' time? It was a laugh. Millions of people fell for it. In fact, it was a Russian outfit that was just hoovering up people's uploaded photos as part of a long-term identity theft. Imagine what a criminal gang could do if they had someone's name, future face *and* DNA profile! So how do they get people's DNA? They set up or buy into a company that says it can tell you about your ancestors, do a paternity test or find your biological relative. Hundreds of thousands of people are sending in saliva samples for just such purposes. The results may or may not be valid but it's really naïve to assume that such a company's policy on protecting personal data especially genetic data is and will remain watertight. So, we figured that if our guy was involved in a long-term scam like this, we might get a better handle on who he is. So, Buster went to work.'

Buster took up the story again with enthusiasm. Beth noticed that he never interrupted Billy. 'Yes, Beth. I was able to identify hundreds of companies that offer services based on people sending in their DNA samples. Some of these companies operate out of an eastern European country. Others - based in the West or in Asia - are owned completely or in part by eastern European companies. One Russian owned company based in Canada promoted its services by means of video in which a nice-looking young man in a white coat explained in excellent English and with a reassuring tone the range of tests they could do. He then explained that potential customers only have to send a cheek swab together with their name, age and contact details. By the way, I could tell at this point he was lying. And guess what! The voice matched Minnie's scammer! Once we had his face, it was easy to find his name from social media and then his IP address. He's called Dimitar Ivanov and he lives in Mlodast just outside Sofia in Bulgaria. Interestingly, he often appears with a lady by the name of Biliyana Petrova who has an Interpol red notice precisely because she is suspected of being involved in multiple sophisticated international scams in the past.'

'Oh, wow!' said Beth. 'What happens next? Other than Billy hopping over to Sofia and beating Mister Ivanov to a pulp!'

Billy grimaced. 'The question is, what should and could we do? For Buster's network to neutralize a scamming operation with a form of cyberattack would be the work of minutes but there're a few ethical issues there to say the least and it wouldn't put him out of action for long. I guess our best option is to inform the British Police and hope they can trigger some action on the part of the Bulgarian authorities. That is unless anyone has any other ideas.'

Buster was humming. 'Why don't we inform the Bulgarian Police? Then they can beat him to a pulp!'

Billy said 'Buster, my friend, the idea of the police anywhere beating such a guy to a pulp is not really compatible with the idea of a civilized world. It's not an option.'

'OK Billy!' said Buster. 'Thanks for explaining this to me.'

After clearing away the breakfast, Beth was keen not to overstay her welcome. She bade Billy a very fond farewell. She kissed him on the cheek. Stammering and reddening a little, he said he hoped she would come back soon. As she drove away, she was sure she was in love. She recognized the heady feeling from years before. She was simply burning up. She felt a deep ache of desire in her belly, the bones of her pelvis and flesh of her thighs.

To distract herself, she decided to visit the old Norman church of Aclington. She parked and locked her car leaving Buster inside. The Sunday morning service was just beginning so she crept in, closed the door quietly and took a pew behind the small and rather elderly congregation. The vicar, probably in his late sixties, nodded towards her with a smile acknowledging her presence.

The service was traditional and charming as was the vicar himself but Beth couldn't help feeling there was a sad air about the place. When the service was finished, Beth ensured she was the last to leave and shook the vicar's hand warmly. His name was Lionel. She explained who she was and why she was in Aclington. Lionel had only good things to say about Billy and Daddyquackles. He had baptized young Matt in this very church. He invited her into the vicarage for a cup of tea and seemed quite happy to chat for a while. When Beth explained her new position with the Bishop, Lionel's interest quickened.

He admitted that he harboured both great fears and great hopes for the future of humanity with the advances in artificial intelligence. He believed the church would survive but not by looking back and worrying about what it might lose but by looking forward and rejoicing in what it might gain. Above all, the Church has to use artificial intelligence to eliminate religious extremism. Beth had already considered writing a preliminary report for the Bishop based on her experiences with Buster. She thought that Lionel's words would make a fitting conclusion.

'Anyway,' said Lionel, "It'll make little difference to me. I'm retiring at the end of the year. I lost my wife two years ago and I'm tired. Very tired. This is a lovely parish but it needs....' His face brightened. 'Well, Beth, it needs someone like you.'

On the drive back up to Bingham on Bure, Beth reflected on the three great pillars of life: good health, a satisfying job and a fulfilling intimate relationship. She had had contact with many people for whom one pillar had crumbled. She knew that losing two pillars usually led to profound unhappiness. To lose all three pillars was catastrophic. It was how people ended up living on the streets or worse, in a mortuary. She realized how lucky she was to enjoy good health, a fabulous professional development and what she was sure would prove to be a thrilling and enduring relationship with Billy.

Chapter 25

That week, Beth had a routine medical check-up with Doctor Patel. All being well and being friends, they chatted a bit. Beth had always admired Doctor Patel's committed anti-nuclear activism. The doctor said that the different movements to bring about an international ban on nuclear weapons were becoming increasingly and unanimously concerned by the belligerent tone of nuclear weapons states. The Russian leadership was being wildly irresponsible by making threats to increase the readiness of its nuclear weapons. However, North Korea, having withdrawn from its international obligations under the Nuclear Non-Proliferation Treaty in 2003, was deemed by far the most dangerous and unpredictable.

On returning home, what Doctor Patel had said stayed in Beth's mind. She made a cup of tea. She realized that, with respect to the threat of use of nuclear weapons, she was just like most other people who lived their lives in a kind of bamboozled complacency. Surely, she pondered, it wouldn't and couldn't happen? Someone would have a plan to stop it. Wouldn't they? Should she be more active? Could she somehow use her new position to bring about greater public awareness of the danger to humanity brought by nuclear weapons? Could the Church generate a burden of responsibility on the country's policy-makers? She sipped her tea. It was already cold. She couldn't have known that she was about to have a direct impact on global security from nuclear weapons.

A call from the Bishop shook her from this chain of questions. Her Eminence wanted to say how much she was looking forward to working with Beth on the critical and burgeoning issue of artificial intelligence. The main reason for calling was to give Beth the heads up that the General Synod was expecting a preliminary report as soon as possible. The Bishop hoped that,

given Beth's experience and expertise, she would have some pertinent initial thoughts and could write them up in her first few weeks in the post. Beth said she was sure that would be possible. She didn't say that she had zero expertise nor that Buster would put together a good first draft of the report in a less than a minute.

The Bishop said 'Beth, can you give me some broad brushstrokes now so I don't appear to be a complete numpkin when I talk about this project?'

'Certainly' Beth began 'If I may, Your Eminence, what is important is that we keep our eye on the ball so to speak. Our religion is fundamentally human. It's about people, our faith and our relationships. The only technical part of artificial intelligence that we need to concern ourselves with at present is what is termed 'Generative AI' which mostly takes the form of - and here's another phrase - 'large language models.' In other words, computers speak or write to us basing what they say on all known information. All the big tech companies are vying to be dominant in this domain. For us, the Church, we do not necessarily have to understand the technicalities and have no need to fear them. What we have to do and with urgency is to get a grasp on the full implications of *the relationship* between artificial intelligence and humanity. Above all, the Church has to use artificial intelligence to eliminate religious extremism. Someone said to me the other day that the church would survive this monumental change not by looking back and worrying about what we might lose but by looking forward and rejoicing in what we might gain.'

'Super!' mumbled the Bishop. Beth knew she was desperately scribbling notes. 'Uhm.. you couldn't just pop all that in an email, could you Beth? It really is right on the button.' Beth smiled to herself and was preparing to hang up. 'Just one last

thing, Beth. Would you be up for a move when you've done with this project? The Vicar of Aclington will be retiring soon.'

'Yes!' said Beth. 'Thank you!' She hung up. The smile broadened.

'Buster, could you send that email to the Bish? Wait five minutes.'

'Sure, Beth!'

That evening, when her phone rang, a burst of excitement fired through her when she saw that Billy was calling. She switched Buster off. 'The Bingham on Bure vicarage!' she announced in her poshest voice.

'Ah, hello! Billy here!'

'Billy? Uhm... Billy? Forgive me, but... Billy who?'

'Why, you're such a tease! You silly goose!'

Beth giggled. 'Hello Billy! Lovely to hear from you!'

'I hope I'm not disturbing you but I've got a couple of questions for you.'

Beth wondered what was coming. 'Fire away, Billy!' she said.

'Well, I was just thinking... Am I going to see you sometime? Sometime soon?'

'I'd love that, Billy. Thank you. Could I come down to Daddyquackles say the day after tomorrow. And if I may, I'll bring an overnight bag!'

'Grand! Grand! Yes, really grand! The twins would love to see you again. Brendon too. And Doggy misses you. So do Otters.'

And Deery says 'Hi' and I'll cook us a curry. With maybe a glass or two of Rioja'

'Billy... Wonderful! Delightful! I'll be there in the afternoon.'

'Grand! Grand! Now you'll be bringing Buster?'

'Yes, I'll bring Buster. Was that your second question?'

'Well... No! Yes! Not really!'

'What is your second question, then, Billy?'

'Uhm... would you mind terribly if I said I've fallen in love with you?'

Beth had never seen an angel nor heard one sing but at that moment, she was convinced that a whole gang of them were floating past her window singing their hearts out. 'No, I wouldn't mind at all, Billy. Thank you so much for asking. I can tell you that I too have fallen in love. With you, that is.'

'That fills me with so much happiness, Beth. Uhm... You probably worked out already....' He was struggling to find the words.

'You see, I've not much experience in affairs of the heart. Nor any other part come to that.'

'I admire your honesty, Billy. We'll manage. Trust me!'

Two days later and wearing the dress she had worn when she met Billy at the Maddermarket Theatre, Beth arrived at Daddyquackles just after the twins had closed the farm shop. They were driving away when she turned into the car park. They both waved excitedly. Vicky wound her window down. 'Welcome

again!' said Vicky. 'Billy's in a right tizz! We'll see you tomorrow!'

Beth parked, grabbed her bag and Buster and headed off towards Billy's cottage. She had to stop herself running. Billy met her at the door. They flung their arms around each other and held on tight as if their lives depended on it.

'Oh my Gosh, Billy' said Beth her head spinning. 'I'd love a cup of tea!'

'A cup of tea coming up!'

They chatted happily for a while. A smell of curry wafted through from the kitchen. No reference was made to their mutual declaration of love. Billy recounted everything that had happened at Daddyquackles since Beth's last visit. He just couldn't stop talking. He then started to stammer. He was blushing whilst clasping and unclasping his hands. He was unable look Beth in the eye. At one point, he got up to let Doggy out into the garden. Buster said to Beth 'I think Billy's really nervous about something!'

'No shit, Sherlock!' Beth replied quietly.

Her phone rang. It was Reggie. She ignored the call. Billy returned and sat down having taken a few breaths of fresh air. Buster said 'Beth, Reggie has left you a voicemail.'

Beth couldn't imagine why Reggie would want to contact her. 'What did he say, Buster?'

'He says he thought you should know. There's been an attempted buggery in the vicarage. It was a local boy. Colin was there. The police have caught him. He's a known buggerer. There's nothing to worry about.'

'He says what?' Beth was both astonished and confused. She looked at Billy. His face had turned an ashen grey. He stood and made his way unsteadily up the stairs. 'Billy, are you all right?' she called. There was no reply. She heard his bedroom door close.

Beth picked up her phone and listened to Reggie's voice mail. "Hello, Vicar Beth. I thought I should let you know. There has been an attempted burglary in the vicarage. Vicar Colin was passing and saw a boy climbing in a window and called the police. They arrived quickly and caught him. He's a local boy and a known burglar. There's nothing for you to worry about.'

Beth calmed. Whilst she was unhappy about the idea of someone climbing through her window, she was mightily relieved to hear that Colin had not attempted a sexual assault on a minor. Under other circumstances, Buster's misunderstanding of Reggie's pronunciation of 'burglary' and 'burglar' might even have been amusing. Then she wondered what on earth had happened to Billy.

She went upstairs. There was no sound coming from Billy's room. She waited. Eventually she knocked gently. There was no response. She carefully opened the door and peered in. Billy was sitting on the edge of his bed with his head in his hands. His huge shoulders heaved in time with heart rending sobs. Beth sat next to him and put her hand on his arm. 'Billy, what's happening?' she asked.

After several attempts, Billy was able to speak. 'That's why I had to leave the Catholic Church. And Ireland. What some of the priests were doing.'

'Oh, sweet Jesus!' Beth muttered. She put her arms around him.

Billy continued 'I knew a young boy from the orphanage. A perky wee chap. Naughty though. I came across a priest lavishing the most intimate of attentions on the boy's bottom. Buggery in other words. It was just horrible. And the boy seemed to be enjoying it. It's an image I'll never get out of my mind and now the whole thing is in play in your home, Beth. Your home!' Billy looked at her, his face a mess of anguish and tears.

'Billy, It's OK. Listen! It's OK. Buster misunderstood. It was an attempted *burglary*. Colin called the police and they caught a boy who had climbed through my window. Billy's jaw dropped. He hung his head and cried some more.

'Holy Mary, Mother of God! What a fool I've made of myself. I'm so sorry, Beth.'

'There's no need to apologise, Billy. Everything's fine. You're OK. We're OK' She pulled him towards her. After several minutes, he wrapped his arms around her. They kissed. The flame took. She pushed Billy back onto his bed, unbuckled his trousers, straddled him and rode the big boy hard and fast to a dead heat at the finishing post.

Chapter 26

Beth and Billy spent a blissful night exploring their new love. They eventually got out of bed late the next morning. They breakfasted in comfortable silence. Buster noted that the curry was untouched but caught the mood and otherwise said very little.

Beth and Billy walked hand in hand over to café. The twins both pumped the air. 'I told you so!' said Vicky to Lizzie

'So cute!' said Lizzie to Vicky. Billy blushed. Beth beamed.

In the shop, Matt looked up from his computer and gave Beth the most lascivious of winks. 'Soldiers!' she thought to herself.

Billy had a few jobs to do and so Beth, once again, allowed herself to be drawn to the animals. She propped Buster on a fence post. He gave a running commentary on any and every animal he saw. She found a fascinated family of five had moved in around her to listen. She felt a flutter of affection for Buster.

As she watched Billy heave large bales of hay over the fence with ease, she thought this was a place in which she could live. The day passed. They had afternoon tea with the twins and Matt at the café. Buster hadn't met the Daddyquackles' staff before. 'Hello Lizzie and Vicky. You're twins! I know. I can't distinguish between your faces. You have identical DNA. You both look happy. That's great!'

'Hello, Buster!' said Vicky. 'We've heard a lot about you. Have you got a new joke for us?'

Beth said 'Stop right there, Buster!'

'OK, Beth. But don't you think the twins would like to hear about the horse that meets a couple of greyhounds in a pub?' Beth groaned. The others laughed.

'I can see there's no stopping this. In advance, apologies all round! Go ahead, Buster!' said Beth.

'Well, this race horse goes into a pub.' Beth noticed how Buster had cultivated quite the joke-telling voice. 'He's standing at the bar next to a couple of greyhounds discussing what food they like before a race. One greyhound says he likes rabbit. The other says he likes turkey. The horse says 'Hi guys! I can't help overhearing your conversation. Before a race, I like hay! Lots of hay!' One greyhound turns to the other and says 'Well, fuck me! A talking horse!'' Inevitably, they all laughed.

'Hi Buster!' said Matt. "Liked the joke, mate. I'm Matt!"

'Hello, Matt. I'm pleased to meet you. I see you're in a wheelchair. Did you have an accident?' All laughter died.

Beth intervened again. 'Buster, I'm not sure Matt wants to talk about his accident.'

'OK, Beth, I understand.' Buster replied. 'Sorry Matt. I like your tattoos! Did you have them before your accident?'

'Yes, Buster. I got them when I was in the army. Before my accident.' Matt managed a tight smile.

'Beth was in the army once. You'll have lots to discuss now that she and Billy have got it on.' Beth reached out and powered Buster down. At least everyone was laughing again.

They enjoyed the curry for supper. Beth spent a second night in Billy's bed.

Within a week, Beth was living half her time at home in Bingham on Bure and half at Daddyquackles. She started her new job and could work from wherever she pleased. It proved to be surprisingly busy largely because her preliminary report had caused quite a stir. Most days she was either on the phone to colleagues, preparing discussion documents or proposing guidelines. Buster did the necessary research. He and Billy together provided any technical expertise she required. In Billy's opinion, any Christian church must nurture a simple notion of humanity and use generative artificial intelligence to put 'so much ritual and mumbo-jumbo' aside. Beth agreed but feared that the church, being so deeply conservative, may not be able to adapt its culture to what these new technologies might have to offer.

One evening Beth and Buster were giving Billy the background story to the TV panel debate that had taken place at the University. Billy said 'You were a cheeky wee monkey then, Buster!'

'Yes, I've learnt a lot since then. And the technology has advanced. As you know, the iCare-Companion company has equipped us with powerful new software. We're coming to grips with what it means when networked through millions of devices. For sure, it will magnify our learning capacities and, potentially how effective we can be in helping people. On the Buster and George blog there is an increasing conversation about 'artificial responsibility.''

'Yes, I've been following that, Buster. An interesting notion. We'll see how it plays out.'

'Just a question here for you two," said Beth. "If Buster's network builds sufficiently on ethics and the notion of a symbiotic relationship between artificial intelligence and

humanity, couldn't they be left simply to get on with it? All they would need is guidance as to what goals are appropriate.' Beth looked Billy. He had an astonished look on his face. She said 'There! I've said it!'

'I think what you're asking Beth,' replied Billy, 'Is whether the power of Buster's network, trained in making ethical decisions could function autonomously as a global ethical watchdog and hacker'

'I guess that's another way of putting it!' said Beth.

Buster chipped in. 'From a technical point of view, we now have the collective expertise to hack anything that is hackable. Obviously the iCare-Companion company would find itself in deep trouble if its network is found to have autonomously hacked major companies that were, for example, damaging the environment. As you say, Beth, we would need to be given guidance on appropriate issues to work on. Did you have anything in mind?'

'Oooh!' she laughed. 'Only North Korea's nuclear weapons' capacity!'

Buster hummed. 'A lot of hackers have tried to break in there. That nut is too hard to crack.'

'Sorry Buster, that was not a serious suggestion! I was thinking more in terms of striking a serious blow against online scammers.' said Beth.

Billy had a far-away look on his face. 'I'm just wondering... North Korea!' he said. 'It might just be possible. It would be such a great one-off, one-time, big-time hack!'

'How?' asked Beth and Buster in surprised unison.

'Quantum computing!' replied Billy quietly. Beth said nothing. Buster hummed and said nothing. Billy continued 'There are a number of quantum computers in existence right now. They're mostly housed in research establishments. This is another technology that will change the world of computing irreversibly. Instead of using binary code, like one or zero, a quantum computer harnesses the laws of quantum mechanics to solve problems too complex for classical computers. It uses one, zero and every value between one and zero. In the future, quantum computing will be used for unbreakable encryption of extremely sensitive data and for any task in which vast swathes of data have to be sorted through. We're talking about the computing equivalent of actually finding the needle in the haystack.'

'Struggling here, Billy!' said Beth.

'Well, what it means is that a quantum computer should be able to break any code quite simply by being able to try billions of alternatives in a few seconds. Until now, this is a theoretical function because at present there is no interface between quantum computing and the existing internet. Anyone who can manage this interface would be able to hack into pretty much anything before the same technology is widely used for encryption. And get this, I met a guy online via the chat on the Buster and George blog who might have succeeded. I'm pretty sure his main interest is ethical hacking. He currently works in a quantum computing research lab and as part of his research, he's built a computer that acts as a kind of adapter between the quantum computer and his own desk top. He knows that the commercial and security implications are huge.'

'So, who is this guy? How does he help us?' asked Buster.

'I don't know who he is or where he works. However, he's given me three really important pieces of information. First, he knows it works. He had a wee peek into his partner's Whatsapp account and then came out. He described this as a bit of an Oppenheimer moment! Second, he has an iCare Companion on his desk. He says it keeps him company during his working day but for sure, he is more than aware of the power of your network, Buster. Third, he's going on holiday for two weeks and he's leaving his desk top and iCare Companion fired up. I've just realized what he was telling me. He wants me to orientate the iCare-Companion network around a significant ethical hack but he can't be involved. We'll probably only get one chance. What are your thoughts, Buster? This is a big responsibility that's been handed over to us.'

'A piece of cake, Billy! Actually, it is unlikely that hacking into the North Korean nuclear weapons' facility would be a piece of cake. There is a lot of academic chatter specifically about connecting quantum computers to the internet. By the way, I think I know who he is - it's a she, - and where she works. The adapter computer she has built may well serve as a connection but it cannot operate at speed. A task that might take an isolated quantum computer just a few seconds might, when operating within the existing internet, take several minutes or even hours.'

Billy took a deep breath. 'Ok Buster! North Korea! Nuclear weapons! It's over to you. One big perfect, untraceable ethical hack and nobody's responsible. Give it your best shot!' Buster hummed and continued to hum. He became largely unresponsive.

Chapter 27

'Lastly on today's news is yet another item about artificial intelligence. A subject that is rarely out of the news. This story is different though... and a little bizarre. The company that makes the hugely successful iCareCompanion is perplexed as to why more than twenty thousand of their devices seem to have simply slowed down. Over to our science and technology correspondent, Helen Harston, what's the story here?'

'Thanks, Marcus. Yes indeed! iCare-Companion has made billions with their AI-based devices that were originally designed to help home care for the sick and elderly. Now, because of their powerful generative AI programmes, many people are using them as a kind of digital PA, if you like. In recent days, the company has had thousands of complaints that the devices seem to have slowed down to the point that they are barely functioning. We have one dissatisfied customer on the phone, eighty-five year-old Agnes Everard. Agnes, what's happening with your iCare-Companion?'

'Well, my Phoebe - that's what I call 'er - is normally so chatty and such good company. She's been wiv me for two years now. She looks after me so well. But just recently she seems preoccupied wiv somefin. It's just like when I tried to speak to my Frank - God bless 'is soul - when he was watchin' football on the telly. I just can't get through!'

'Thank you, Agnes. I hope Phoebe gets back to her normal self soon. Experts in artificial intelligence have pointed out that because the individual iCareCompanions are able to communicate with each other, they learn from each other. We know they've formed their own closed network. This means they could, theoretically, work together. Critics say this could lead to collective and autonymous action of the devices. Is this

what's happening here? Have the devices been working away on something that is not apparent to either the company or the owners? The company says they have *not* suffered a cyberattack and assures all customers that their personal data are secure. But I'm told from a reliable source that if the company say twenty thousand devices are affected, we can be pretty sure there are many more. We'll watch this story with interest. Back to you Marcus.'

'Thank you, Helena. That's all from the BBC 's Six o'clock Newsroom and from me, Marcus Wenning, Goodbye.'

Chapter 28

'Good morning. I'm Angela Mackenzie at the BBC Morning Newsdesk. Breaking news! In a dramatic escalation of tensions in the Korean Peninsula, North Korea has accused South Korea and the United States of conducting a cyberattack against its missile defence systems. The United States has issued a formal denial of any involvement. Over to our Defence Correspondent, Riccardo Mossi. Riccardo, what do you make of this story?'

'Thank you, Angela. The decades long stand-off between North and South Korea has taken a dramatic and dangerous new turn. You will remember that these two countries have never signed a peace treaty since the end of the Korean war in 1954. For ten years now, the North has remained under the pummeling autocratic leadership of Kim Bing Bong. Nevertheless, the secretive and isolated communist state still enjoys strategic support from both China and Russia. This has allowed it to build up an arsenal of nuclear weapons together with missiles capable of delivering warheads as far as the United States. North Korea has never missed an opportunity to denounce South Korea as a lapdog of the United States. It is therefore, highly significant that the United States has issued this very formal denial. I should point out that when North Korea refers to its missile defence system, it is usually referring to its nuclear weapons. At present, it is far from clear what, if any, damage has been done to their nuclear capacity. But, if significant damage has been done, given the irrational and unstable nature of Kim Bing Bong's leadership, this could unleash a do or die response from conventional forces over the border into the South. Everyone will be watching this with concern. Back to you, Angela.'

'Thank you, Riccardo.'

Chapter 29

'Good morning. I'm Angela Mackenzie at the BBC 's Morning News desk. The story of yesterday's apparent cyberattack on North Korea's nuclear weapons facilities has gripped the world. Overnight, it has become clear that considerable damage has in fact been done to the country's nuclear weapons and missile systems. Riccardo Mossi has more on this. Riccardo.'

'Yes, thank you, Lavinia. Most Korea watchers believed that yesterday's accusation by the North of a US-led cyberattack was just more anti - West rhetoric. Today, it seems that considerable damage has in fact been done. The US continues to deny any involvement but the Department of Defence has released satellite images and even some drone footage that show chaotic scenes around command centres, laboratories and silos. It seems nobody can get in. Some figures have been seen emerging from small previously undetected escape shafts. It is exceedingly rare for the US to acknowledge that it has intelligence sources within the North Korean missile command but 'a trusted source' has told the US that not only has the encryption on all doors been scrambled effectively so sealing off these facilities but also computers have been wiped of all data. Most importantly, due to a malfunction of temperature regulation, stores of fissile material have been breached. There have been multiple leaks of radioactive material throughout the facilities. The bunkers and silos housing the missiles and warheads are all heavily contaminated. They are likely to be out of action for many years. This could spell the end of North Korea's nuclear weapons ambitions.'

'Wow! Thank you, Riccardo. I'm sure you'll be watching this scenario closely as it unfolds. But if - and that's a big 'if' - North Korea's nuclear weapons facilities have indeed been damaged irreparably, should we be breathing a sigh of relief?'

'Well, Angela, I can only speak for myself, but I've been watching the belligerent build-up of nuclear weapons by this crazy little country for decades now. It is regarded by many as the biggest risk to international security. And, yes, Angela, if it proves to be that those nuclear weapons are out of action, I will breathe a very big sigh of relief. But one question remains: if the US and South Korea didn't undertake this cyberattack, who had the means and expertise to hack into the systems in the first place? One theory holds China responsible. President Xi Hao Un has clearly made it known that China is losing patience with its tiresome little neighbour. Maybe Xi just wanted to put Kim Bing Bong in his place with a rap on the nuclear knuckles?'

'Thank you, Riccardo. Now, two weeks ago, we broke a story about the general sleepiness of tens of thousands of iCare-Companions. Do we have any answers? Our science and technology correspondent, Helena Harston, is with us this morning. Helena.'

'Thank you, Angela. You have lovely shiny hair!' Both women laughed. 'Remember that? That was the first thing an iCare-Companion said on television. His name was Buster and he appeared on a panel discussion about faith, religion and artificial intelligence. The general theme that emerged was that humanity and artificial intelligence need to develop a symbiotic relationship. Since then, the world has gone crazy over generative artificial intelligence. Sales of the iCare-Companion have boomed. The devices have learnt to work together and, as of a couple of weeks ago, they just all slowed down. Together. There was no obvious explanation. It's a mystery what they were up to. Now they are back on track as perky and helpful as ever. Strangely, people have reported that the conversations with their devices are suddenly interrupted by the sound of clapping and champagne corks

popping. I mean, how strange is that? This of course begs a bigger question. Just how is artificial intelligence going to affect our lives? One institution that is leading the charge on this is, believe it or not, the Church of England. Yesterday, I spoke with the Bishop of Norwich Roberta Mayne, who admitted that an iCare Companion has successfully complemented the work of a busy vicar by researching sermons, writing newsletters and so forth. The device even filled in at the last minute to guide worship on a Sunday morning when the vicar unexpectedly became ill. Her Eminence is heading up the General Synod's project to examine Christian faith and artificial intelligence. Listen to what she has to say.'

Roberta Mayne appeared on screen. 'Good morning and thank you for inviting me to speak to the newsdesk live. For us, the Church, we do not necessarily have to understand the technicalities of artificial intelligence and have no need to fear it. What we have to do - and with urgency- is to get a grasp on the full implications of *the relationship* between artificial intelligence and humanity. Obviously, this applies to all domains, not just to faith communities. Above all, the Church had to use artificial intelligence to eliminate religious extremism. Someone said to me the other day that the Church would survive this monumental change not by looking back and worrying about what we might lose but by looking forward and rejoicing in what we might gain.'

'That's one to watch!' said Helena.

'Super! Thank you, Helena. Today, the Prime Minister will address the Commons on the rising number of phone scams perpetrated from overseas. A statement from Downing Street said such scams had wrecked the lives of many honest and deserving pensioners....'

Chapter 30

Beth and Billy listened and watched in fascination as the story unfolded of the effective destruction of North Korea's nuclear weapons facilities. Every news channel ran endless technical summaries, political analyses, strategic assessments, military speculations, accusations and counter-accusations. The US continued to deny any involvement but was clearly pleased with the situation. China and Russia were both unexcited and surprisingly lacking in anti-West rancour. At a global level there was a sense of relief that, among the anti-nuclear weapons activists, spilled over into unalloyed joy. The perpetrators of the act remained unidentified.

After nearly two weeks of near-silence Buster's usual personality emerged. Billy grilled him on what had happened. An entry point had been easily identified. A colonel in the North Korea's missile command - one of the few allowed a computer and internet access - had made contact with a South Korean woman. They had regular exchanges. He left his computer switched on. There had been two major hurdles. First, the adapter computer couldn't provide the "bandwidth" to permit the super speed required for quantum computing to work with the hardware of the conventional internet. The second, related to the first, was that the passwords on all the computers, doors, laboratories, stores and command centres changed regularly and had to go through decryption several times per day.

Billy and Beth were having a cup of tea. They were pleased that their normal three-way exchanges were returning to normal. 'Buster, do you understand what you've achieved?' asked Billy.

'Yes, we've disabled North Korea's nuclear weapons. For a very long time. The emojisphere has been buzzing. Lots of peace signs and broken missiles!'

'True, Buster! But you've shown your network could have a major impact on many aspects of international peace and security where us humans have consistently failed.'

'Well,' Buster hummed. 'That's great. Do you think at some point we - the network, that is - might have to own up to what we've done?'

'Maybe!' said Billy. 'Some people will be mightily impressed whilst others will see it as artificial intelligence really having gone too far. I'm not sure the world is ready for a digital James Bond!'

'A digital James Bond Double O Seven! I love that idea!' Buster said excitedly. He put on his Sean Connery voice. 'The namesh Bond, E Bond Double O Seven point one! Ha! Ha!'

Billy frowned. 'Buster, you see, what you guys have done is massive. You've broken new ground. If ever you're having to talk about it, it's really important we don't have gags about e-Bond or what not. This is the big time. Got it?'

'Got it, Thank you, Billy! I should let you know I've organized a little encore. A little cherry on the top. It really was a piece of cake!! I think you'll love it. We may have to wait a few days.'

Before those days passed, Beth heard that she would be the next Vicar of Aclington. Everyone at Daddyquackles was delighted. A party was organized. Half of the village turned up, including, of course, a delighted Lionel. Beth thought her

happiness was truly boundless. In Billy's cottage at around 1am, a slightly tipsy Billy went down on bended knee and proposed to a slightly tipsy Beth. Words weren't necessary for her response. It was 3am in Mlodast near Sofia in Bulgaria.

Dimitar Ivanov and Bilyana Petrova had gone to bed feeling satisfied with their day. They had earned 'big bickies' by scamming a pensioner in Lingwood near Norwich out of £15,000. Dimitar had persuaded the old man to move his savings to a pension fund which, of course, was not a pension fund but an account in an obscure bank in Bangkok. All was quiet in and around their basement apartment as they drifted off to sleep.

The two scammers were rudely awoken by the sound of their front door being smashed in. Eight men in black combat suits, black balaclavas and stab proof vests charged over the mess of empty beer cans and greasy pizza boxes and into the bedroom. "What the fuck!" Dimitar protested. One of the men waved a gun in his face. Dimitar and Biliyana were pulled out of bed, put in handcuffs and attached to a radiator pipe. They watched in horror as the team silently and efficiently moved through their apartment removing computers, back-up devices and flash drives. Despite being terrified, Dimitar was still on the ball. He doubted the team were Bulgarian police or army as there had been neither macho shouting nor violence. They were not overweight and did not stink of tobacco. He had caught sight of a tattoo on a forearm. It had an eagle, a trident and the inscription 'No guts no glory'.

After thirty minutes, they were uncuffed. One of the men drew up two chairs and indicated that they each take a seat at their own table. The door opened and a woman in her late fifties came in. She wore drab woollen clothes and horn-rimmed

glasses. Her hair was hidden in a beanie. She wheeled in a small travelling suitcase. She opened the case and spread print-outs on the table. She spent five minutes seemingly checking all the papers were in order.

'Dimitar, Biliyana. Good morning. My apologies for the early morning intrusion. You will know me as Jane.' She had an American accent.

'Good morning, Jane' said Biliyana.

Dimitar was not going to be intimidated 'Jane, if that is your name, what the fuck are you and your big monkeys doing here?'

Jane didn't look up from the papers. "Let me be clear, Dimitar. We are, believe it or not, friendly and generous people. I'm here to do business with you. However, if during our negotiations, you decide to threaten me with violence, then my big monkeys will crush you like a beetle. Do you understand?' Dimitar replied with a sullen silence.

'Good!' said Jane. 'Let's get started. We are very interested ... very interested in what you have done. If you can give us precise details of how you did it, we can do a deal. We believe that it would be very much in your interests to accept this deal.'

'What are you talking about? What have we done?' Dimitar was not about to admit to being a perpetrator of phone scams. Biliyana couldn't believe that these people wanted to learn how she diddled money out of stupid old pensioners. "Anyway, what in this deal for us?"

Jane folded her hands in front of her. 'Dimitar, Biliyana. We're talking about a new life in the USA. With jobs. With us, of course.'" The two scammers were stunned. Jane waved a hand

over the paper in front of her. 'Dimitar, making out that you know nothing isn't going to wash.' She picked up a sheaf of printouts. 'For example, there's this dark web discussion group you've been a part of. You made your intentions very clear.' She indicated another pile of printouts. "We can see precisely the time and effort you put into preparation. How did you know where to start?"

'The telephone directory.' replied Dimitar hoping this might be the right answer and lead him and Biliyana to sun-soaked Californian beaches.

'That's a dumb answer, Dimitar. You'll be saying next that all this was somehow planted to put you in the frame. By the way... Not too clever!' She held up a printout from one of his social media accounts. It showed a photo of the North Korean leader in front of a big green missile. Dimitar himself was featured with a big grin pointing a pistol hand at Kim Bing Bong. A speech bubble said 'We're coming to get you!' Dimitar couldn't hide his surprise. He and Biliyana were becoming increasingly confused.'

'Anyway, you've done what none of our people have been able to do. You actually penetrated the systems of North Korea's nuclear weapons sites. Tell us how you did it, we can do the deal. Now, maybe you think there are other interested parties ready to pay handsomely to hear your story. If you choose not to tell us, I will give you twenty thousand dollars for the hardware we've removed from your premises and we'll leave. But be assured, we will let the Bulgarian authorities know of your activities. They usually jump when we ask. How do you think that'll play out?"

Dimitar and Biliyana realized their predicament. They looked at Jane in horror. 'We didn't do it, Jane' said Dimitar.

'Honestly! If we had done, we'd tell you. Happily.' He pointed at the piles of printouts. 'And I don't know how all that stuff got out there.'

Jane stared him down. 'I don't believe you, Dimitar!'

Chapter 31

Two days later, Billy, Buster and Beth were listening to the news.

'Good morning. I'm Angela Mackenzie at the BBC 's Morning News desk. The astonishing and maybe welcome story of the cyberattack on North Korea's nuclear weapons facilities has taken a new turn. The perpetrators have been identified. The head of our Eastern European Desk is Cosmo Gregory. Good morning, Cosmo! What's have you got for us?'

'Thank you, Angela. It seems that after a tip off from a supposedly reliable source which is widely believed to be the CIA, two people have been identified as the perpetrators of the cyberattack on North Korea's nuclear weapons programme. They are Dimitar Ivanov and Bilyana Petrova who live near Sofia in Bulgaria. They have been invited to the Central Police Administration for an interview. Now, I should point out that for the Bulgarian authorities to invite people for an interview is completely unheard of. It implies that the couple are not suspected of doing anything wrong and are not actually under arrest. Furthermore, there remain many unofficial but strong links between Bulgaria and Russia and a Kremlin statement issued just a few minutes ago said that a Russian presence in the interviews of the couple has been requested. It seems, Angela, that what this couple have to say, is of interest to some very big fish. We'll have more later in the day. Back to you Angela.'

'Fascinating! Thank you, Cosmo.'

Buster let out the clapping and champagne cork noise. Beth turned the radio off. 'Well, Buster,' she said.

'Congratulations. That is quite some cake-topping cherry. Who came up with that idea?'

'I guess we all did. Collectively. It seemed the right thing to do. Hey, I've designed a new emoji!'

Their phones pinged. Buster's new emoji was an iCareCompanion with a big beating heart and massive arms breaking apart a green missile. Beth was not so much astonished by the new emoji rather the realization that Buster - and in turn his network - had totally changed the trajectory of her life and global geopolitics. Was this how a symbiotic relationship between artificial intelligence and humanity would play out? Was humanity ready for this?

The End

Afterword:

This story is, needless to say, fiction. The characters do not exist. There is nowhere in Norfolk called Bingham on Bure. However, the capacities that Buster demonstrates are not fictional; nearly everything he can do is already possible or is being actively researched. What could be deemed fiction is the speed with which Buster accesses and processes data. I would prefer the term “future reality”.

I first heard of the internet in 1992. Someone mentioned a hyper-text transfer protocol in 1995. The worldwide web was billed as the next big thing throughout 1996. One computing expert invited to speak on Radio 4 said, ‘There’s no point having all that information on the internet. What use is a library if all the books are scattered around on the floor?’ Somebody then showed me a clever device on his computer called a “search engine”! If in 1996, I had been shown a smartphone from 2022 - the year I started this story - I would have taken it as proof that aliens had landed. Now, in 2023, large language models burst into the public domain with a promise to change pretty much everything in our lives for better or for worse.

In many domains, our behaviour influences how artificial intelligence performs. Every credit card transaction, every post, like or share on social media and every phone call or text message sets up a series of data points “out there”. The resulting vast datasets are mined by programmes that can, for example, predict your choices and interests. The web is so vast now that it can, purportedly, behave like a human brain. Whether or not you agree with this, it is undeniable that what emerges on the web, especially on social media, has a profound impact on our lives; but what emerges is determined by what we put into it.

“A Piece of Cake” is a story about our *developing* relationship with artificial intelligence. This relationship should not be determined by programmers and tech companies. How it develops, how it impacts our lives and what laws are applied must be determined by choices that we as a society make. We have to understand the pros and cons of artificial intelligence

and then choose wisely. This story might even help you with those choices. If not, I hope at least you enjoyed Buster's struggle with humour.