

## Chapter 3

‘Explain to me what it is that you do, David. What is your job?’

David and Sarah are slumped on oversized beanbags in a tiny office that lies behind the guitar room. Like the other breakout areas, the room is bright and sparsely furnished, though here all the surfaces – ceiling, walls, floor – are mirrored, rather than transparent or frosted. The effect is mesmerising. While Xan speaks, David finds himself constantly distracted by his own reflection, both disturbed and excited to see himself from so many new angles. Every time he crosses his legs or readjusts his glasses or runs his fingers through his hair, an endless army of clones instantly mimic him. Everywhere he looks he’s there. There’s no escaping himself.

‘Um... I make videos?’

Beside David, Sarah is doing her best to retain an air of professionalism, despite lying almost horizontal.

‘I think what David is *trying* to say is that he is one of the top thirty independent content creators currently working online today. As a filmmaker, vlogger, and soon-to-be author, his good looks, fashion-sense and relatable, everyman charm have brought him a huge audience, particularly amongst the traditionally difficult to reach 14-17 demographic. Over the last three years alone he has

amassed a loyal following of hundreds of thousands of regular viewers, not to mention over...'

Around the room, a billion Xans hold up their hands in unison.

'Thank you, Sarah. I'm aware of the figures. Allow me to rephrase. What I'm trying to get at isn't so much *what* you do, but what the *purpose* is. What is the point of you, David?'

Sarah opens her mouth to answer, then closes it again, stumped. She turns to David, who scratches at his stubble.

'I guess the point... Well... People watch my videos because they care about what I think about... stuff.'

Xan beams. 'Bingo! I mean, that's it in a nutshell, right? You're a commentator. A critic. You live your life and then you talk about it. Simple as that. And people go crazy for it. They know you. They like you. They value your opinion. Hell, most of them probably consider you more as a friend than an entertainer.'

The assembled Sarahs breathe a sigh of relief. 'Absolutely, absolutely. In fact a recent poll indicated...'

'Of course they do, dude,' Xan continues, cutting her off. 'It's just so intimate, isn't it? No middleman. No artifice. Just you and a camera. An open portal into your life. The ultimate reality show. I mean, forget TV. Video blogging is the *real* successor to Gutenberg's press. You don't need industry connections or years of drama school. Literally

Xan towers above them, smiling. All around them his reflection trails off into infinity. An army. A lynch mob.

‘Because,’ he says, grinning. ‘We’re going to kill it. Together.’

Without another word, he takes out his phone and jabs a finger at the screen. The surface of every mirror goes instantly blank, plunging the three of them into near total darkness, the room lit solely by an eerie, pixelated glow. Alarmed, both David and Sarah scramble up from their beanbags. Moments later there’s a crackle of light as an image appears behind Xan. It takes David a second to understand what’s going on. That rather than glass, the walls, floor and ceiling are actually enormous plasma screens. A six-sided cinema, with them in the centre.

The image is crisp and high definition, and appears to show a life-size hospital room. White walls and pastel green curtains frame a chrome bed, at the head of which is a bulky machine. A long white tube with a hollow circle in the centre, just large enough to squeeze a person through. An MRI scanner.

Xan touches his phone again and the image on the screen changes, zooming in until they are able to see there is someone in the bed. With a jolt, David realises it’s Katya, her flawless profile unmistakable, although her dark hair is masked behind a white plastic helmet and headphones.

‘What’s going on?’ David asks. ‘Is she okay?’

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'What's going on?' David asks. 'Is she okay?'

'Oh, she's perfectly fine,' Xan says, speaking into his phone. 'Aren't you Kat?'

Though no sound comes from the screen, Katya manages to free a hand from beneath the sheets and holds a thumb aloft.

'We haven't got that room wired up yet,' he explains. 'It kept interfering with the scanner. They can hear us, but we can't hear them.'

As David continues to watch, two nurses in full surgical scrubs appear from either side of the screen. In mute silence, one of them begins to attend to Katya, tucking her arm back under the sheets, while the other moves to the scanner and begins to adjust various dials and buttons.

Grinning, Xan turns back to David and Sarah, both of whom are staring at him as if he's lost his mind.

'Remember when I asked you what you did David, and you said you shared your opinions with people?'

David nods, though he continues to be distracted by the screen. Behind Xan, the bed has begun to move, and is slowly feeding Katya headfirst into the open mouth of the machine.

'Well what if I told you there was another way to share your thoughts with the world? No camera. No talking at all in fact.'

‘David’s already working on his autobiography, if that’s what you’re getting at?’ Sarah asks. ‘In fact, it’s due out later this year.’

Behind Xan, the nurses retreat from the scanner. Katya’s body has been swallowed entirely now, only the rough outline of her feet visible at the bottom of the bed.

‘No, I’m not talking about a book,’ Xan says. ‘Or a website or an app or a social media channel, or any of that stuff. This is a brand new medium altogether. Something that’s never been done before.’

On the screen to his right, an image suddenly appears. A cross section of a brain, its bulbous symmetry reminiscent of some bizarre, monochromatic vegetable.

‘You’ll have seen one of these before,’ Xan says. ‘This is just your garden variety MRI scan. Or technically an fMRI scan, the “f” standing for functional.’

Sarah nods. ‘I had one done on my knee last year.’

‘I’m sure you did. They’re as common as having a tooth pulled these days. And so you understand the basic principle behind them? We use magnetic fields and radio waves to build up a picture of the body. Which in this case happens to be Katya’s brain.’

David turns again to the screen. Flashes of yellow flicker across the vegetable, crackling like a lightning storm over the surface of some distant alien planet. ‘What’s that?’ he asks.

'Areas of increased blood flow. This type of scan is designed to track brain activity. The yellow patches indicate which parts of Katya's brain are working hardest right now.'

David stares at him blankly.

'You've heard of the left-brain/right-brain theory before? Where the left takes care of creative thought while the right is tasked with logic. I mean, that's obviously a wild simplification based on bad nineteenth century science. Yet, broadly speaking, it's correct to say that each of the seven thousand or so regions of the brain are responsible for various explicit functions. Therefore, by examining which parts of the brain are active, we are able to gain a rough insight into how someone is feeling. For instance, if you look at the cluster of activity around Katya's frontal lobes, you might reasonably infer that she's in a fairly relaxed state right now.'

David looks at the image, unable to make out anything beyond a vague blur of grey and black and yellow. He shrugs. It means nothing to him.

'As I say,' Xan continues. 'This is all ancient technology now. Decades old. Where things do start to get interesting however, is when we start being able to identify specific thoughts, as opposed to just vague feelings. You see, it turns out that most people's brains are surprisingly similar, neurologically speaking. For example, when I think of a dog and you think of a dog, our brains create a similar pattern. By recognising and decoding that pattern



we are able to predict, with a fairly high degree of certainty, what somebody is thinking about, just by monitoring their brain activity. Here, I'll show you.'

At this, Xan once again speaks into his phone.

'Kat honey, could you please think about what you had for breakfast this morning.'

Almost at once, the blank wall to Xan's left quivers into life as a shiny red apple appears on the screen. Though it is perfectly recognisable, the image is not quite photographic. There is a slightly dreamy quality to it, the outlines blurred and shifting, the whole thing shrouded in a swirling grey mist. A mirage made of smoke.

At the sight of the apple, Xan laughs. 'Is that it? So much for the most important meal of the day.'

'But how did you...?' David asks, his face glowing from the light on the screen. 'Is that... What is that? A camera in her brain?'

Xan chuckles. 'Not quite. It turns out that while it's simple enough to recognise *what* somebody's thinking about, it's very difficult to know *how* they're thinking. I'll give you an example. If I were to plug both you and Katya into that machine and tell you to think about a dog, the chances are you'd both think about very different animals. Even if I were more specific, and told you to think about a poodle, the picture you'd see in your minds would still be radically different from each other's. You see, as ever, context is the problem. There's a mistake that most people make about



the brain, in that they tend to think of it like a computer. As if our thoughts and memories are like files, just waiting to be clicked on and opened up. But it's not really like that at all. Thoughts don't happen in isolation. They come wrapped in the baggage of a lifetime of personal experiences and history and education and all the rest of it. When you think of a poodle, you might think of your auntie's pet, Fido. But Katya might picture something else entirely.'

David scratches his head, adjust his glasses. He's confused. 'So if it's not showing us what she's thinking, what *is* it showing us?'

'Ah, but this is showing us her thoughts. Or at least, something very close to them. You see dude, we've come up with a neat little workaround. Thanks to social media, people's personal histories aren't such a mystery anymore. Katya here has kindly recorded almost a lifetime of pictures and videos and all the rest of it for us to sift through. Everywhere she's ever been. Everyone she's ever known. At least ninety percent of the meals she's eaten in the last five years. It's all out there for us to reference. So now when we ask her to think of a poodle, we're able to cross reference every poodle that's ever been in her life and then, in a matter of nanoseconds, and with an unerring degree of accuracy, create a simulation of the one she's thinking about. Super cool, huh? Now why don't we try something a little more complex? How about, oh I don't know. What about your earliest memory? What's the first thing you can remember, Katya?'

Instantly the picture of the apple disintegrates, the mist whipping and dancing across the screen, a flickering snowstorm of ash grey pixels. It reminds David of the static between channels on an old television set, though here there doesn't seem to be a pattern to the chaos. It's as if it has a life of its own.

The three of them keep watching, as gradually a picture begins to emerge, a faint figure in the centre of the screen.

A man?

No...

A woman?

Suddenly the mist clears, and the image pulls sharply into focus. On the screen a young woman stands in the corner of a child's bedroom, sunlight pouring into the room through cotton curtains. The woman looks like Katya, the same age, the same build, although her hair is blonde rather than black. She is sorting through a bag of baby clothes, folding them carefully, arranging them into piles.

David glances briefly at the opposite screen. A storm of yellow flashes across the grey vegetable brain, as section after section simultaneously lights up. Meanwhile, the wall behind Xan still shows the frozen tableau of the fMRI machine, the only sign of movement the occasional twitch of Katya's feet beneath the sheet.

He turns back to the film.

The woman is folding a tiny dress, lost in her own world, when abruptly she turns. Something has caught her

attention. She stares out at them from the screen, a quizzical expression on her face, before breaking into an enormous smile. And now they see it is Katya's mouth on this other woman, Katya's eyes, radiating nothing but pure, unadulterated love. And if they had any doubt before, now they are certain this must be her mother.

That this is her first memory.

She stands facing them, her arms open wide, as if aiming to scoop the three of them up into her bosom. She stoops down, opens her mouth. And then she speaks, Danish words booming out of the speakers that are concealed in the walls of the darkened office.

'Hej, min elskede,' she says.

*Hello, my love.*

At the sound of her voice, Sarah and David gasp. At that exact moment, the picture bursts apart, Katya's mother and the nursery once again evaporating into a churning particulate mist, before all three screens fade to black. The lights come back on, leaving David and Sarah staring speechlessly at their own reflections, struggling to process what they have just seen.

At last Sarah breaks the silence. 'Incredible. Just incredible.'

Xan grins. 'Hell yes it's incredible! And that's not the half of it. The program we use to interpret the data is getting more accurate all the time. It actually learns as it goes along. With a couple of weeks of solid use, we envisage that the slight distortion you saw there will disappear

altogether. And with someone like you, who's been filming and documenting their thoughts online for years now, the accuracy is going to be out of this world. Eventually we'll show an endless stream without interruption. Every thought, memory, feeling, even frickin' dreams, all of it streamed in high definition, twenty-four hours a day. I mean, this thing's going to be...'

'The biggest show on the planet,' Sarah says, finishing his sentence.

Both of them turn and face David. He is staring at the mirrored walls, once again trapped by his own reflection. Sensing their eyes on him, he reluctantly looks around.

'I'm sorry, but you've lost me. Where do I come into all of this?'

'Come into it?' Xan says, his arm snaking around David's shoulders. 'You *are* it, bro. Or at least, you could be. Listen. Imagine a show where instead of droning endlessly to the camera about what you thought of a film, or what you ate for breakfast, or what you did at the weekend, we actually get to see it, right then and there. No lag. No delay. No clumsy descriptions. Just a direct feed, straight from your brain to the screen. Everything you're thinking, live and uncut. A constant stream of content, all day and night – even when you're asleep! Forget video blogging, dude. *This* is the next logical step. This is evolution. This is MindCast.'

David glances from Xan to Sarah, her eyes moist with excitement. He watches as she mouths the name silently to herself, seeing how it feels on her lips.

*MindCast.*

He turns back to Xan. 'You're kidding? You can't actually be serious?'

Xan stares at him, his gaze unflinching. 'Why not? We have the technology to do it. You've just seen a simulation of someone's earliest memory, right there on the screen. This is the chance of a lifetime.'

'Presumably David will be fairly compensated for his participation in this... this experiment?' Sarah asks. 'We've got his image rights to think about. Licensing...'

'Don't worry about that. My people have already started drawing up the contracts. We're working on an assumption of a fixed signing fee, plus an ongoing percentage of revenue. I'm confident you're going to be very pleasantly surprised with our offer. You're going to be rich, bro.'

David shakes his head. 'It's not about the money.'

Sarah turns to him, appalled. 'Well what then?'

'It's just...' he gestures helplessly to the mirrored wall behind Xan, to the place where minutes earlier they had watched Katya lying in a hospital bed. 'I mean come on guys. You can't honestly expect me to lie in a brain scanner for half my life?'

Sarah nods. 'That's a good point. I can't see his existing fans being too happy if he's hidden away in a tunnel most of the time? His face is one of his most recognisable assets.'

At this, Xan begins to laugh, quietly at first, then wildly, his head becoming a blur.

'That thing? Dude, that's just a prototype we use so we can demonstrate the tech. No, the actual machine we use is *much* smaller than that. In fact, here. Look.'

He pauses, swipes at his phone and holds it up for them to see. David squints.

On the screen, no bigger than his smallest finger nail, is a tiny, green microchip.

'That thing?'

Xan nods. 'Everything you've just seen, we can do with this chip. The M900. Only one of its kind on the planet. This baby represents six years of research and development. That's actual size, too. It's designed to be worn internally. Just here,' he taps at the back of his head. 'Near where the spinal cord meets the skull.'

'What? You mean I'd have to have *surgery*?'

'There's a minor operation involved, yes. But it's nothing. Perfectly safe. We use a general anaesthetic, so you won't feel a thing. You'll be out the next day. Neat, huh?'

David laughs. This has to be a joke. When he turns to Sarah, however, he sees she isn't smiling.

'There will be a short period of adjustment while the chip learns to interpret the data,' Xan continues. 'But we'll basically be ready to begin streaming from almost the moment it's fitted. The MindCast platform is built and

ready to launch. The website and app are already in place. We're good to go. All we're missing is a star.'

David glances down at the phone again. The chip is so small it looks like it would snap under the slightest pressure. It looks like a toy. He tries to picture a scalpel working its way under his skin. He tries to imagine what it would feel like to have something inside him. In his head. He can't though. None of this seems real. All of it sounds impossible.

'Will there... Will there be a scar?'

'Not at all. We make a small incision just below the hairline at the back of your neck and peel back the scalp. After that it's simply a case of a small craniotomy. Keyhole surgery, basically. All very standard, very safe. In fact we'll do the operation right here, in our designated medical suite. I think you'll find our facilities are a bit of an improvement over anything your NHS has to offer. There might be a bit of swelling for a day or two, but once it's healed you won't see a thing.'

Xan is smiling now. A serene, dope-stoned grin. And yet, at the same time there's a look in his eye that leaves David in no doubt that he is utterly serious.

Behind him he feels Sarah's hand on his back. It's meant to be reassuring. Nevertheless, she seems to be pushing him closer to Xan.

He takes a step forward.

'So, what do you say, dude?' Xan asks. 'Are you ready to be the most famous person on the planet?'