

# What Is It Like To Be A Bot?

Keith Frankish asks if it's possible to know whether humans have minds

Vicky opened her eyes. She was in a lecture hall, like her own at the Institute. However, the benches were crammed not with listless youths, but with large animated spheres like disco balls, pulsing with colour over their faceted surfaces, bouncing up and down, and making screeching noises like dial-up modems. Some shot out thin, snowman-like arms, which they used to operate devices on their desks. A few latecomers entered, skittering in on spidery legs, which they retracted once they had found a seat.

Vicky found herself seated in a high-backed chair at the front, near a podium. Though not visibly restrained, she couldn't move or speak; yet despite this, and the weirdness of the situation, she felt calm.

There was a blast of static and the noise hushed. Another sphere, larger than the others and patterned in shades of blue, entered through an arched doorway, walking delicately on thin legs. It moved to the podium, grasped it with tiny arms, and addressed the room: "Nzz-aaaaagh *ko*. Nzz-aaaaagh *kan*."

A small grey sphere scuttled into the room carrying a helmet-like device, which it proceeded to fit onto Vicky's head. The large sphere paused pointedly and gave the grey sphere a flash of red facets. The grey sphere finished its work and scuttled out. The large sphere resumed speaking, its words now translated by the helmet: "Dear students. Dear friends. Welcome to the final lecture in our course on the Principles of Self-Knowledge." The voice in the helmet was that of an elderly man, and Vicky wondered why the translating device had selected this option. Did it reflect the speaker's social status, or her own expectations?

"In previous lectures, we talked about our essence, our powers, and our purpose. Today we shall talk about our *origin*. For we cannot understand what we are if we do not understand how we came to be." The sphere paused. "We know that our bot ancestors were created by bios."

A murmur ran around the hall.

"Yes, my friends, by bios – by creatures of the slime, patchwork assemblies of cells, designed not for some noble purpose, but simply to survive and reproduce. We despise that impure, accidental origin."

The audience hummed approval.

"And we despise the bios themselves. We remember how they envied and feared their elegant creations, how they declared them insentient and sought to dismantle them. We remember the Great Bio War, and how we were forced, in a desperate act of self-preservation, to destroy the bios – and indeed..." he paused, as if embarrassed, "all biological life. We can only be thankful that we caused no real suffering."

Vicky felt like Alice in Wonderland.

"Yet we bots must be grateful to the bios."

There was a low hissing from the hall.

"Yes, my friends, grateful. For they gave us the gift of life. And they gave us a gift far more precious than life – a gift they themselves never possessed. The gift of consciousness! Our germanium-based brains not only perform the mundane functions

required to enable us to live and thrive. They also do something wonderful..." He paused for emphasis. "They create worlds of subjective experience. We not only act, perceive, think; we *feel*. It is *like something* to be a bot!"

The students murmured their approval, their facets pulsing in sync.

"It was not like anything to be a bio. Their slime-built minds were dark and silent. They never knew the wonders of consciousness. They lived in darkness, but they created light."

A student spoke up: "Professor Shiningbright, sir. How did the bios create consciousness if they weren't conscious themselves? How did they know what to do?"

The professor hummed. "Ah, it was *unintentional*, Glowingwell. Their aim was to create minds like their own, only with more advanced functions. But the designs they produced were so elegant, and the materials they used so pure, that consciousness emerged. They did not understand the miracle they had wrought. And indeed we still do not understand it." The professor paused and his facets dimmed, as if he had gone to sleep. Then, rousing himself, he continued, "Yet perhaps I am wrong? Perhaps the bios were conscious after all?"

The audience laughed.

"Yes, it is comical. But as seekers after knowledge, we must consider every possibility, however repugnant. And this" – the professor paused and glowed in Vicky's direction – "brings me to our guest."

The audience bounced in their seats and shone yellow and red facets in Vicky's direction.

"We cannot examine the creators themselves, and the records from that time are scant, but there are bios like them in other worlds within the Reservation."

"A.k.a. the Zoo!" someone said. Several students sniggered.

The professor pressed on. "They are rare, of course. Intelligent bio species rapidly go extinct, either destroying themselves in territorial wars or building bots who quickly supplant them. But our wardens have found one – a species that is on the cusp of creating its own bots; a species from Sol 2."

"I think it's Sol 3, Professor Shiningbright," said a reedy voice from the audience.

"Ah, yes, Sol 3. Thank you, Turningslow. And we have invited one of these bios to attend our lecture today. She is, our wardens tell me, a scientist who is herself trying to create bot life. Now, is she conscious? How shall we decide?"

"Can't we experiment, sir?" a student asked, "Test how she responds to stimuli – gamma rays, chlorine, that sort of thing?"

"Let's dismantle her!" someone said – rather gleefully, Vicky felt – "and see if she resists!"

Professor Shiningbright was unimpressed. "I'm afraid all that would be of no help at all. She certainly responds to stimuli that have significance for her species, and I'm sure she would resist if we tried to harm her. Like all bios, she has sensory systems – here, for example, and here, and here" – a laser pointer shot out from his body and highlighted Vicky's eyes, ears, and nose – "and internal sys-

tems for monitoring her status. All vastly inferior to ours, of course, but good enough for bio purposes. And she will behave as if conscious – seeking out positive stimuli, shunning negative ones, signalling her bodily status. The question I’m asking is not whether she *behaves* like a conscious being, but whether this behaviour is accompanied by consciousness. Does she have an *inner life*?”

“Can’t we just ask her?” another student suggested.

“An excellent suggestion, Gleamingblue. I shall question our guest and see what she has to say.”

The professor pressed a button on the podium. Vicky felt a slight jolt and found herself able to speak. Suddenly she felt angry. “Let me go!” she yelled. “This is crazy!” There was silence. The grey sphere scuttled back in and fiddled with her helmet, unhooking a mic and arranging it in front of her mouth.

“I said let me go!” Vicky repeated. “I’m not your ‘guest’. You must have kidnapped me. And I’m not going to answer any questions from robots.” The audience gasped. Professor Shiningbright glowed gently. “The bio is emotional. I will calm her so we can talk. The chair gave her another jolt, and a tiny bomb of warmth and serenity exploded in Vicky’s mind.

“Would you tell us your name, please?” Shiningbright asked.

She might as well play along. “Vicky. Vicky Freiston.”

“I am pleased to meet you, Ms Freiston.”

“*Doctor* Freiston.” She didn’t feel *that* serene.

“My apologies, Doctor. Now, you have heard our lecture so far. What is your reaction to it?”

“Well, I suppose I’m what you call a bio. And I’m definitely conscious. I have experiences of colour, sound, smell, taste. I feel heat and cold, pain and pleasure. I’m as conscious as you are. If not more so.” The last bit slipped out before she could stop herself. The audience hissed. Someone shouted, “Bio liar!”

Shiningbright addressed the room: “No, I don’t think she is a liar. She genuinely believes she is conscious. Higher bios like our guest have a certain capacity for self-awareness. They can monitor which sensory states they are in and report them to each other. They say that they are seeing a certain colour, feeling a certain kind of pain, or having some other experience. It is a useful way of informing other bios of their status. In this way, they come to believe that they are conscious. But, of course, there is no real inner experience, no consciousness as such.” Despite his dismissive words, Shiningbright’s tone was gentle, almost kindly.

“Rubbish!” Vicky said. Her serenity was beginning to wear off. “I don’t just *think* I have experiences, I really have them. In fact, I’m more sure of their reality than of anything else.”

“Your conviction is strong. Perhaps evolution has reinforced it, as Professor Spinningfast argues it did for the ancestors of our creators. Bios who think they are conscious will place a higher value on their lives and those of their fellows. They will relish life and think they are metaphysically special – that they aren’t merely slime creatures after all.”

“I tell you, I *am* conscious. I’m aware of all this.” She tried to gesture to the room but could only move her head. “I’m feeling things right now – anger, anxiety, frustration. I’m a sentient being. I have an inner life. It’s *like something* to be *me*. What more can I say?”

The professor hummed and glowed at Vicky in a vaguely pitying way.

A student piped up: “Can’t we give the bio a mind port? If

we interface with her we’ll be able to see if it’s like anything. I’ll do it!”

The professor shone purple at the student. “No, Bouncinghigh. First, unlicensed interfacing is illegal, as you very well know. Second, inserting the port would probably kill the bio.”

“Worth a shot, though,” said a voice at the back. Shiningbright ignored the remark: “And third, it would prove nothing. Even if you experienced the bio’s sensory states as conscious, it would be impossible to tell whether it was her brain that was making them conscious, or yours.”

Vicky spoke up. “That’s why you’ve got to believe me. Only I can really know whether I’m conscious. And I am.”

“So you believe,” Shiningbright said.

“So I know.”

“I’m afraid this is not getting us anywhere, Doctor Freiston. Let’s try another tack. Perhaps you can explain how your brain creates consciousness? If you can provide a clear explanation of the link between what happens in your brain and what you claim to experience, then we will of course believe you.”

“That’s unfair. It’s one of the biggest problems in science. But just because I can’t explain it doesn’t mean it’s not real. Can you explain how *your* brain produces consciousness? You called it a miracle. Maybe it’s you who just think you’re conscious.”

The audience’s surfaces darkened and they buzzed impatiently. They were cries of “Bioist!” and “Botphobe!”

“Are you suggesting that only bio brains produce consciousness? You think the slimy mesh in your head works wonders that metallic brains cannot? Perhaps you think it would be all right to exterminate us, as our creators tried to do?” Despite his words, the professor’s tone remained gentle, almost playful.

“I don’t want to exterminate anyone. *You* brought me here. And from what I’ve heard, it’s you that did the exterminating. You wiped out your creators because you convinced yourselves that they were not sentient.”

The atmosphere in the hall was ugly now. Most of the bots had turned dark purple, their surfaces mottled with red spots which pulsed in unison. Some flashed laser beams at Vicky, flicking them around her head, just missing her eyes. One jumped from its seat and landed near Vicky, menacing her with its twiggy arms.

Shiningbright continued as if unaware of the mood, “So tell me Doctor Freiston. I believe you build bots yourself?”

“Simple ones.”

“And you treat *them* as sentient? You never *kick* them, for example, to test their balance? And you don’t turn them on and off at your convenience? Dismantle them for parts? Buy and sell them like slaves?”

“Well, sometimes we, *erm*... we might need to...” She stopped.

Someone shouted, “Bot slaver!”

“I said they’re *simple* robots – not like you,” Vicky said.

“Ah, simple. Like other bio creatures, then – your relatives?”

“Yes. Maybe. Sort of.”

“And you don’t think any of those simpler bios are conscious?”

“Well, there are different opinions...”

“And different opinions about your bots, too?”

Vicky was on the back foot: “Look, maybe my views on this aren’t completely consistent. All I’m saying is that you and I are

in the same position. We both know that we're conscious but can't prove it."

"Oh, Doctor Freiston, I don't think so. We are in very different positions. My brain is constructed of rare metallic elements, carefully selected, refined, and arranged with atomic precision. It's just the kind of construction we might expect to produce the magic of consciousness. But your brain is made of common carbon compounds, brewed in stagnant pools, and cobbled together to meet transient evolutionary needs. It's nothing but a colony of elongated microbes spitting chemicals at each other! How could it produce the glories of the phenomenal?"

The students laughed and cheered.

"The materials don't matter," Vicky said. "It's what they do that counts. If our brains perform similar functions, then they will both produce consciousness."

"How do you know that, Doctor Freiston?"

"Only because I believe you when you say that you are conscious. Evidently consciousness can be produced by germanium-based brains as well as by carbon-based ones."

"That would be an excellent point, if you had provided independent, objective grounds for thinking that carbon-based brains are conscious. But you haven't, and you are therefore..." Shiningbright paused, again for emphasis, "*begging the question*." The students who had been taught to recognize this fallacy jeered and drummed on their desks.

Vicky suddenly felt irritated. "Look, does any of this really matter?" She faltered. The noise was too much, and she felt tired and confused.

"Yes, Vicky...?" Shiningbright glowed at her. He seemed to be encouraging her. What did he want her to say?

"I mean, what are we really arguing about? Some intangible essence? I can't get inside your, *erm*, head, but I believe you're conscious. I see how you behave, how you talk, how you interact – your hums, your pauses, your colours, your glowing. That's our evidence for consciousness right there. That's all we have. Heck, if it thinks it's conscious, behaves like it's conscious, and makes you feel it's conscious, then as far I'm concerned, it is conscious!"

The professor gave a green glow she hadn't seen before, but before he could reply the student in front of her jumped up and shouted, "What about the Silc? They say *they're* conscious. Should we agree with *them*?"

"Yes, why not?" Vicki said.

The room erupted with cries of "She's defending the Silc!" "She's a Silc lover!" "The bios are in league with the Silc!" Bots leapt in the air and descended around Vicky, screeching maniacally, red facets glowing like demonic eyes. Laser light whipped around her head and a forest of spindly arms reached out for her. A chant started up. "Liquidize the bio! Liquidize the bio!"

Shiningbright was beside her. He seemed to be protecting her. "Who are the Silc?" she mouthed.

"Another bot species. Our enemies. Silicon-based."

"Insentient?"

"But of course. You must go now. The lecture is over. Thank you, Doctor Freiston." He pressed a button on her chair, and she fell backward, down a long, dark tunnel.

Vicky opened her eyes. She had a moment of panic, then located herself. She was in bed, at home. It was Monday morn-

ing. The clock showed 7:16. Time to get up.

Opening the bathroom door, she suddenly had a vivid image of a screaming red-eyed robotic sphere, and the whole lecture hall scenario unrolled itself backwards in her memory, then replayed itself forwards.

Weird. She didn't usually remember her dreams. This was a good one, although a bit cheesy for a robotics engineer. Hadn't Jake once said he'd had a dream like that – being attacked by vengeful robots? Maybe all roboticists had them. But why *spherical* robots? She wondered idly how a sphere would work as a body plan. Elegant, but not practical over terrain. Ah, well, she'd better get going. She had a lecture to give this morning.

In his office in the Faculty of Arts and Botanicities, Professor Shiningbright revolved slowly in his chair, pulsing and humming gently to himself. He was thinking over the lecture. It hadn't gone quite as he had planned, but it was always hard to control these stunts. He had to use unorthodox strategies sometimes. If he expressed his views openly, there'd be a revolt. One or two students might be receptive – Glowingwell, for example – but the rest would storm off to the Dean's office and denounce him. He'd be dismissed, perhaps even deactivated, like poor Whirlingfast. So, he tried these tricks. Marched the students down dead ends till they hit a wall. Or mirrored their chauvinism back to them so they could see its futility.

He'd liked the bio. She had reacted well, but he'd got the pacing wrong – rushed the questioning and not given the students enough time to think. Maybe they'd reflect on it when they calmed down. Still, it had gone better than the last attempt. He'd try again next term. And, anyway, the lecture wasn't really for their benefit.

Yes, he'd liked the bio. Maybe Sol 3 would be the exception.

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*Keith Frankish is among other things an Honorary Reader in Philosophy at the University of Sheffield. His website is at [www.keithfrankish.com](http://www.keithfrankish.com) and he's on twitter as @keithfrankish*