

Longacre Press Teachers' Resource Kit

genesis

a science-fiction novel

by Bernard Beckett

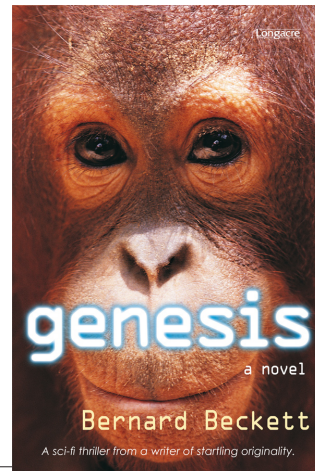
*Go forward in time: it's nearing the end of the century.
Do you see a dramatically altered New Zealand?*

In a terrifying and stifling examination environment a young Academy candidate, Anaximander, is put through a gruelling exercise in interpreting the history and origins of her society.

Through her answers, we learn that in 2052, New Zealand has been renamed The Republic after a reforming Governor, Plato. It has separated itself from a plague-ridden globe with a gargantuan ring-fence guarded with military outposts. All approaching boats, exploratory air craft or refugees are shot on sight. Society is strictly divided and individuals deviate from their assigned roles at their peril.

When one man, Adam Forde (2058–2077) insists on his right to independent thought and action, The Republic is set at grave risk. Adam is imprisoned: his sentence is to become the participant in a programming experiment with a new brand of Artificial Intelligence.

Through Anaximander's rendition of Adam's debates with Artfink, the android, and her own increasingly disturbing encounter with members of The Academy, we are confronted with unresolved questions raised by science and philosophy. Centuries old, these conundrums have gained new urgency in the face of rapidly developing technologies. What is consciousness? What makes us human? What separates us from the animal and mechanistic worlds? If Artificial Intelligence were developed to a high enough capability, what status could humanity still claim? As a species, we may have built in our own obsolescence, even if the planet itself is preserved.



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Resource Kit Contains

author statement
reading, writing and drama exercises
questions for discussion/essay topics
research questions

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Outstanding and original, Beckett's dramatic narrative has a stunning closure that turns the reading experience on its head. *Genesis* will fuel intense debate about ethics and meaning between intellectually hungry young adults.

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The Author:

Bernard Beckett is one of our most provocative and inventive writers for young people. His books are extremely popular with teenagers. He has won awards and fellowships for his fiction: *Genesis* is his seventh novel. Of the most recent, *Malcolm and Juliet* won the 2005 NZ Post Senior Fiction Award, and *Deep Fried* (co-written with Clare Knighton) was short-listed for the 2006 NZ Post Children's and Young People's Book Awards. Last year Bernard was awarded a NZ Science, Mathematics and Technology Fellowship where he was exploring DNA mutations.



Bruce Foster

Author's notes:

The **genesis** of *Genesis* itself is a little muddled. In the end it was a book that came out in a hurry, taking only a few months of furious tapping to take shape. That said, it's based on ideas I'd been playing with for a few years. It all started...

With a book, oddly enough. Maybe it was called *Five Equations that Changed the World*, or maybe *The Ingenuity Gap*: my uncertainty just comes from the fact that I'm not sure which of them I read first. Either way, it started me reading science books: glorious works on evolution, on the birth of the universe, on mathematics, physics, philosophy and psychology. These days my book shelf groans under the weight of my favourites, and the list of books in the library I mean to read grows longer.

The world is a curious place it seems, and we know a tremendous lot about it, more perhaps than most people realise. And the more we know, the trickier it becomes for our old stories to hang together. We need new stories.

Genesis came from that sort of stuff. The first attempt to write it didn't work: in my head it was

somehow more than just a diverting story and that's always a mistake. So I put it down... Then I did what I often do. I wrote a play, trying the ideas out on stage, to see if the characters would come alive. And once the play was over I forgot it for a while...

Then I found myself in 2005 on a fellowship at the Allan Wilson Centre for Molecular Evolution, trying to write a quite different novel, but I stalled, got lost in the middle of the story and needed a way of avoiding it for a while. I was at my computer, I had a library full of wonderful books just around the corner, and a headful of ideas, and somehow, while I'd been distracted, this book had written itself. It was just a matter of getting the words down.

I like the way the story has turned out. I'm not sure what it has to say, in the end, and that's what I like most. It's about things that puzzle me, as all my books are in the end. I hope it puzzles you too, in a friendly sort of way.

Activities:

Reading Activity: Alternative opening.

Genesis finally came together after a number of false starts. Below is one of those, the opening to a novel that was never finished, but with similar themes. Read it, and compare this to the eventual opening of *Genesis*. What are the main similarities? What stand out to you as the major differences? Which do you prefer, and why? How would you have linked this into the story with Art the android?

.....

It began this way, with a murder. A small child, female, torn from her mother, delicate head smashed against rock with practised indifference. Sixty-eight thousand years before Abraham was born. Abraham's great grandfather, two thousand seven hundred times over. Fleeting carrier of the Y-chromosome that would split and wriggle its way into Abraham's struggling life.

Later it began again, with a promise broken. Then with a meal stolen, a brother pulled from a fire, a falling boulder bouncing left not right, only centimetres from the end of the line. Abraham began because a large animal was hunted for seven days and nights, and then succumbed. The climate changed and his mothers learned to sow crops: his fathers learned to defend the land with their lives. His fathers took concubines, and his journey continued. A man joined seafaring adventurers, who raped and pillaged their way into the heart of a new land. Another bought property, a mother took up a pen; recorded a moment in the journey. A grandmother stood by, took sides, held her hand. Life begins with a chance meeting, a man and a woman, and that familiar flood of the chemicals. It begins with a desperate act of self-deception, a moment of vulnerability. Again and again and again. And I have not even scratched the back of the flea that sucks upon the cooling corpse of the lives that needed to be lived before Abraham could be brought into our world. A billion forebears, a trillion momentous coincidences, both marvellous and inevitable. Unremarkable. The story of Abraham Claxton is the story of you all.

My story begins with Abraham. It is a story told and retold; copied and remembered.

It happened in 2065, ten years ago now. The Second

Sixties. Those who enjoyed cycles spoke of the new optimism, the future shock, the cultural lurches; academics wasted time describing patterns that shifted when you looked at them.

Abraham wasn't happy. He wasn't that sort of person. Happiness sat uncomfortably with him. He was listless, but at the same time restless. Angry, although he did not know who with. Resentful, but he did not know what of. He was seventeen.

Life should have been good. Only the week before his doctor, as part of his graduation recruitment check-up, had read his genome and predicted another seventy-eight healthy years. His genes had provided a strong recipe, too strong, in the end. And his school had noted his potential across a wide range of functionalities [...]

What followed the next day has been well documented. Eye witness accounts, Abraham's own testimony and of course the data from the early part of his assessment flow provide a dense picture. There is little need to speculate.

The [examination] hangar was dimly lit. Abraham was escorted to his seat by a man in a wrinkled red uniform. Ministry of Training, the patch on the shoulder announced. The man smelt, as if he had not been bathed that morning, and his uniform appeared unwashed since last year's duty. His hair, thinning and grey, was gelled up at the front, untouched by fashion. His skin was uneven and inflamed, and the simple task of directing candidates to their allotted chairs took all of his concentration.

Throughout the hangar similar red uniforms washed forward[...] Abraham's seat was on the right, halfway down. He was directly below a light, and took up his visor, to adjust the setting for the glare. 'No one is to touch the equipment yet.' A voice at his shoulder, a woman this time, with pneumatic breasts and short, angry hair. Abraham placed the visor back on the stand in front of him. He had peed twice that morning, but already there was building the uncertain, restless sting that would demand his attention for the rest of the morning. His stomach was tight. He wiped his hand across his forehead. It felt cold, wet.

Visors on.

Two thousand moved as one. Abraham adjusted the glare, looked forward to the focus points, waited for them to drift together, relaxed his eyes, and let the 3D

image fill his world. He chose a number, sixty-three, counted backwards in twos, his father's trick, felt the world fading away, flatlining.

The first task came quickly. It was being presented simultaneously to every candidate in the country. A recent sop to the liberal activists who claimed the Waiting was too nerve-racking for young people. Dumbing down, Satchen called it. Six dice tumbled across Abraham's vision, from left to right. *Shoot down the odd one out.* A simple start. The sort of thing he'd practised a thousand times. He tried to relax, let his subconscious deal with the tumble of colours and dots. They were fading. He spotted a difference between two and four. Fifty fifty. He directed his eyes, blinked his instruction.

Incorrect. Current score 0 out of 24, 0%.

A seven appeared at the centre of his vision. Faded. *Give the next number in the sequence.* A five appeared, faded. Abraham considered the possibilities. [...] The more clues, the lower the score. He needed a confidence hit, to negate his poor opening. He blinked for the number one.

Incorrect. Current score 0 out of 78, 0%. National mean, currently 43%. Variance from the national mean, -43%. Maximum score now possible, 97.5%. Matriculation requirement, 82%.

A semi-circular tunnel has radius 2.7m. Give the maximum volume for the rectangular load of a flat-bed unit, if the deck is 4.6m long, and 64cm above the surface of the road. You have five minutes.

Calculus was a weakness for Abraham. He'd put his last hour of study aside for it, but that was a mistake. Something to do with Nina being there, his Amp pills fading more quickly than expected, and a reaction to the masking elements he'd taken. But he'd seen this question before. Next to him he sensed another candidate squirming. They were all still working together. A clock appeared at the top right-hand side of the screen. Four minutes twenty seven left. Counting down.

[...]

Abraham's scan sent crazy warnings, as if he didn't already know. He felt sweat pour down the inside of his visor, tasted the salt of it in his mouth. His leg trembled, knocked against his visor stand. He controlled it by pushing down with his hand, forcing his foot hard against the floor. Thought of trucks. Tunnels. Saw Nina, naked. And a clock, ticking down.

Incomplete. Score 0 out of 128, 0%. National mean

currently...

Then came the Waiting.

The dreaded Waiting. A candidate could simulate for it as often as they liked, but they'd never be prepared. [...] A headache now, deep, at the base of his neck, nausea, still needing to piss.

[...]

The voice electronically generated, neutralised with respect to accent and speech patterns. The visor lit up, Brite Blue ready. They'd left him for less than five minutes, this time.

Listen carefully to each question. You will be posed three ethical scenarios. For each you have thirty seconds to give your answer. Fifty points are available for each question.

Abraham brightened. Ethics was his favoured learning area. It was split into three units, individual, information and interaction. There was little more to it than applied memory. Learning the case studies. His contextual recall was strong.

Scenario one – individual ethics:

A friend is dying. He has given you the right to request termination, but has instructed you not to proceed until there is no further opportunity for consciousness. A donor opportunity exists, but the doctor is unable to predict whether your friend will regain consciousness. The organ donations will save three lives. Do you proceed with termination? Why?

'No.' Abraham was confident. It was like they had said at school, the questions wouldn't be difficult. It was the environment that would test you. 'The validity of the termination process would be undermined, so leading to a greater overall loss for the society.'

Correct. Second scenario. Life expectancy information is accidentally loaded onto your pod. You can erase it immediately, or use the information to benefit an investment opportunity for your family. What do you do and why?

'Use the information,' Abraham answered, again without hesitating. 'Information accidentally disclosed is available for common usage, as the subsequent punishment of the provider is considered to be our best system of information protection. I would use it even if the benefit did not accrue directly to members of my family.'

Correct. The voice was programmed to remain neutral to candidate success, but Abraham believed he could hear a reluctance to award points. It was a battle now. Satchen would be proud of him.

Scenario three. A recent town reproductive committee ruled against the wishes of a citizen to trade her unused gender determination quota. Was the committee correct?

'No, it wasn't. Class one voting rights are the only rights currently considered unsuitable for trade.' Abraham relaxed. His heartbeat slowed. He felt his destiny rising up to meet him.

Incorrect. End of questions.

'But ...'

Current score 100 out of 278, 35%. National mean, currently 64%. Variance from the national mean, -29%. Maximum score now possible, 90.5%. Matriculation requirement, 82%.

The screen went blank. The Waiting returned. It felt heavier this time. Abraham felt sure his last answer was in fact correct. He scanned back in his head, looking for the exact citation, using up valuable energy [...] perhaps this was a test too. Every year they invented new ways of unsettling the candidates. Could this be their way? Incorrect marking. Could they be using it to break him? Again the screen lit up. A complex 3D shape made of fifteen cubes rotated before him in five separate displays, each a different colour.

Which shape is the odd one out?

They began to fade, more quickly than the dice had. Yellow or Green? Yellow or Green. 'Yellow.'

Incorrect.

There was triumph in the automated voice. Abraham was sure of it, just as he was sure of his answer. Yellow. The yellow shape projected its tip to the wrong side. He still held the image in his head. There had always been rumours, of things like this. Candidates who claimed to have been cheated. Who would ever know? No one ever said the system was corruption-proof. That was just assumed. But why? Abraham now asked. Why should you assume it? He wasn't failing. He was being failed.

And at that moment, at the precise point of time, in the millisecond it takes for such knowledge to settle, in the window of sensation before the silence descended, Abraham heard the candidate next to him grunt his approval. At what? A correct answer? (Later records would show the candidate in question had been receiving the same question and correctly picked green.) A clearing of the throat? A release of nervous energy? We can never be certain. Abraham didn't know. Or think. He reacted. In a sudden, unpredictable wave of red fury. Examination melt-downs were not unheard of.

The volunteers were armed with stun bats and trained to react swiftly. But there had never been a melt-down like this. There had never been an Abraham Claxton.

[...]

First there is now. The moment. The movement. The mayhem. The visor stand is metallic. Heavy metal, designed and manufactured by the same interests who provided the Ministry with the visors. [...] The weapon, as we are about to see, is well balanced, if you hold it near the disc end. The disc is surprisingly light, and held correctly does not impede the free-flowing action of the more deadly spikes.

Abraham's rage took him forward. He ripped his visor off with one hand, and grabbed at the stand with the other (the right, his strongest.) A volunteer approached over his shoulder, but the coughing candidate to his immediate left did not move, the visor shielded him from the world. He was Waiting, in fact, Sheb Lange, current score 211 out of 278; enduring the silence. He never knew what hit him. It was the nine centimetre curve of the stand horn, which came up in a vicious arc, penetrating the skull at the soft point between the top of the ear and the edge flap of his visor. A thin stream of blood left Sheb's mouth as he slumped.

[...]

Abraham moved slowly forward, swinging his weapon with horrifying effect. Beside him, on either side, one aisle away, the poorly paid, terrified volunteers tracked his progress, waiting, almost comically, for the chance to rush in. That chance was slow coming, and indeed it was Abraham who brought about the end of the carnage. He stood over the seventh oblivious victim. That contact had occurred exactly forty-two seconds after he first pulled off his visor, according to the data stream analysed later in court. Was it exhaustion that led to him putting his weapon down? Was it revulsion, brought about by the way the last blow came back out through the popped eye socket of his victim? Was it a chemical switch inside his brain? Was it just a rest, a moment to consider where next to strike?

[...]

Little is known about Abraham in the three months that followed, before his trial. He met his lawyer once, and records from this meeting allow us to reconstruct those events. There are also rumours that he was beaten in custody, but he himself never claimed this was the case. It had begun.

Alternative Opening Reading Activity Questions:

- How has the writer's method changed?
- How has the narrator changed?
- What are the major differences in language and tone?
- What are the main differences in the character's personalities so far?

Drama Activity: Acting it out

Below is an excerpt from the play upon which *Genesis* was partially based. Read this piece through and have a go at acting it out in pairs. In this version Somerset (Adam in *Genesis*) is a woman. How does this change the dynamic between them? What are the main differences between the relationship here and the one in the book? Which do you prefer as a reader? Why?

.....

Scene Two: Somerset is dumped roughly into her small cell. Leroy is already there, chained against the wall.

Leroy: Hello.

Somerset: Don't.

Leroy: Don't what?

Somerset: Try to be friendly.

Leroy: Oh, I wasn't, trying I mean. It's no effort at all. Tell me about yourself then. I've heard a fair bit already, of course, but I'd like to get it from you, from the horse's mouth.

Somerset: Why a horse? Why not a dolphin? Dolphins talk. Horses don't.

Leroy: I think that was the point, that they don't talk. So you'd only believe it if you heard it for yourself.

Somerset: I'm not going to like you. I've already decided.

Leroy: Fair enough... Although that's hardly rational.

Somerset: They told you I was rational did they?

Leroy: Quite the opposite ... But even the most instinctive creature has a touch of the rational about them, more than they think.

Somerset: More than they feel.

Leroy: You're here for life, and I'm your only company. This is it. Look around. Pace it out if you want to, although I could save you the effort. Four by five, my paces, not yours. And you can choose to hate this, or you can learn to love it. They're our only options. I

think we should choose to be friends. It's the sensible thing to do... Don't you think?

Somerset: I don't think it's a matter of choosing.

Leroy: Don't say that. Life happens here now, inside your head, and you still get to choose the decor. Think of it as *Mitre 10 Changing Rooms* for the mind. We could fall in love you know. That'd show them wouldn't it? A mad, passionate love affair, too grand for these small walls to contain. Some people in love would pay a great deal of money for a room like this, complete with authentic paraphernalia.

Somerset: Are you part of the punishment?

Leroy: Some people would take that personally.

Somerset: That's because some people are perceptive. Do those chains hurt?

Leroy: Maybe.

Somerset: Good.

Leroy: You're making this harder than it needs to be.

Somerset: There's nothing rational about us choosing to like one another.

Leroy: Of course there is.

Somerset: You forget where we are. The comfort of the inmates is not the institution's highest priority. If they think we don't hate each other, we'll be separated.

Leroy: And that's the reason you don't like me?

Somerset: One of them.

Leroy: Let's pretend then.

Somerset: Pretend what?

Leroy: That we do hate one another. It can be our secret code. We'll abuse each other, contradict one another, trade insults, run each other down at every opportunity, but we'll both understand it to be an act. Deep down we'll be loving it.

Somerset: That's ridiculous.

Leroy: Why?

Somerset: What you're proposing is a friendship, minus all the good bits.

Leroy: On the contrary, when it comes to friendship there is only one good bit, approval. I don't want my friends to be nice to me, particularly. I just want them to like me. As long as I am certain of that, they can treat me however they want to.

Somerset: Let's just not talk to one another at all then.

Leroy: It's your choice.

Somerset: It is.

Leroy: But you do like me right?

Somerset: It's too soon to say.

Alternative Drama Activity

Dramatise a scene from the novel, and perform it for stage or video.

Debate topics:

- Humans are just self-glorifying animals.
- If scientists achieve genuine artificial intelligence, we will lose our humanity.
- Human rights are an artificial construction.

Creative Writing Activity: Self Defence

Imagine you live in an age when the world is partly populated by androids of human appearance. You are at a party and your friends accuse you of being an impostor: an android. They are threatening to throw you off a cliff. You are terrified. Write the speech you will give to convince them you are really human.

Discussion/Essay Topics

- What makes human life different from any other life on our planet?
- Read Anax's recount of the events that bring us from the present to the time she is living in (pp9–10). What, from our point in time, would have to happen – or not happen – to bring about this future? What, in this projection, relates to our current fears?
- *'...the only thing the population had to fear, was fear itself. The true danger humanity faced during this period was the shrinking of its own spirit.'* (p10)

Although *Genesis* is a book about the future, its roots are in our present world and society. How does the above statement relate to our contemporary society? If this statement is true, what can be done to combat this?

- Anaximander speaks of the human spirit, and its blackening by fear and superstition. Superstition is defined as 'the need to view the world in terms of simple cause and effect'. This in turn leads to the hunt for monsters and the rise of conspiracy theories. Do you agree that conspiracy theories are the desire to create a narrative we can understand out of events that we do not understand?

Does Bernard Beckett rely on superstition and conspiracy theory in his novel, or does *Genesis* attempt to break away from these?

- In the novel, Plato's five great threats to order are: Impurity of Breeding, Impurity of Thought, Indulgence of the Individual, Commerce, and The Outsider. What organisations/philosophies have these ideas appeared in before? Are there instances in history when these ideas been feared/abhorred? Can you find a parallel in our recent history?
- *'... I believe those who feel the urge to understand Adam's heroism instinctively understand the importance of empathy. Perhaps there needs to be, for a society to function successfully, a level of empathy which can not be corrupted.'* (p38)

Adam's actions were, by his and Anax's accounts, the result of empathy. Yet this, for all he knew, put his nation at the risk of plague. This raises questions about the greater good, actions which may be abhorrent but 'necessary', and the instinctive human reaction. Are we still human if we lose this empathy? Or is the ability to put this aside what makes us human? Is it possible to have a level of empathy that is incorruptible? Can you think of any real life examples of this?

- How convincing is Art's theory about the Idea? (pp94–96) What does this imply for humanity? For any 'thinking creature'?
- Re-read Adam's speech about what it is to be human (p97). What is the essence of his argument?

- Re-read Art's argument about the soul (pp108–109). Is this willing ignorance the thing that makes us human? What Art is describing seems to be one of the main tenets for most religions. Though Art claims this idea is present in *all* humanity's thought systems: including reason and the ideas of Darwin. Is there any belief system that doesn't incorporate the idea of a soul and its relationship to eternity? Do you agree with Art's reasoning of why this is so central to humanity's beliefs about itself?
- Awareness of our mortality is given as one of the key differences between humans and artificial intelligence. How does this awareness of mortality influence the way we think about ourselves and our lives?
- Which do you think pushes the boundaries of our ideas of ethics and morality further – artificial fertility treatment programmes, or artificial intelligence research? What are the sorts of ethical questions each field of science raises?

Research Questions

- Research the technology of genome readings. What is the purpose of this technology? What are some of the issues surrounding this?
- Research robotics and artificial intelligence. What is the difference between these? What progress has been made, and what is projected for the near future? What are the most recent developments? What arguments are there for and against the progress of this technology?
- Research the works of the Greek Philosophers Plato and Aristotle, whose namesakes feature in *Genesis*. How do their works relate to ideas found in Beckett's novel?
- How does thought work physically in the human mind? Is it possible to map/record the thought process? Research the way a human brain thinks (or processes thought) and a computer processes data (or 'thinks') – what are the similarities and differences of these activities?
- Find out more about science fiction as a genre. How does it differ from other fiction?
- Read Mary Shelley's novel *Frankenstein* (1818, 1831). This is often called the first science fiction novel. What connections can you see between *Genesis* and the nineteenth century gothic horror? Have the major questions *Genesis* raises changed much since the Industrial Revolution? If so, how?