

THE BRAIN BRAKE

Version four. The comic strip. Shooting and animation document.

RUNNING TIME	00:01:57:20 (limit 2:00)
TIMEBASE	25 fps non drop, HH:MM:SS:FF
FORMAT	16:9, 2731 x 1536
ENTRY	Breakthrough Junior Challenge 2026
PRESENTER	Manan Periwal
CAMERA	Venkatesh, Pondicherry
ANIMATION	Kristijan Kaurić, Brojka, Zagreb
PRODUCER	Neha Sonthalia Periwal

THE FILM IN NUMBERS

- 50 frames
- 18 drawn frames, animation only
- 26 frames with Manan filmed and placed in a drawn panel
- 5 strip panels where a character speaks in a bubble
- 10 lines Manan speaks to camera
- 12 lines Manan speaks in the booth
- 6 speech bubbles, already recorded
- 22 frames with no words at all

BY SCENE

SCENE	FRAMES	DRAWN	LIVE	IN	OUT
1 The Mystery	5	3	2	00:00:00	00:10:05
2 The Old Theory	5	2	3	00:10:05	00:18:01
3 The Full Tank	5	1	4	00:18:01	00:31:13
4 The Gatekeeper	9	0	9	00:31:13	01:12:09
5 The Experiment	8	2	6	01:12:09	01:28:20
6 The Release	8	7	1	01:28:20	01:39:08
7 The Verdict	3	2	1	01:39:08	01:40:13
8 The Invitation	7	1	6	01:40:13	01:57:20
TOTAL	50	18	32		01:57:20

The three layers

Nobody in the audience is told any of this. They absorb it in the first twenty seconds.

DRAWN

Everything imagined

Pencil on warm cream paper. The factory inside the muscle, the hall of tanks, Coach Brain, the lever. This layer is the explanation, the model people built in their heads to make sense of the body.

LIVE ACTION

Everything true

Manan. Real skin, real hoodie, real hands, photographed against grey and placed inside the drawings, casting a real shadow onto the paper. This is the evidence, and the person who came to look.

THE BOOTH

The film being made

A dark room, a music stand, a microphone, one warm light behind him. He is a silhouette and the only lit thing in frame is the page in his hands. A shadow, reading, which is exactly what a narrator is. It opens the fourth wall: for a few seconds we are behind the film, in the room where a boy is making it.



The booth shots are cutaways, three or four across the film, dropped in when it wants you to remember somebody is telling you this.

THE MAGNIFYING GLASS IS HOW WE CHANGE SCENE

Wherever Manan holds the glass up at the end of a shot, that lens is the door to the next one. Push in until the circle fills the frame, let the new scene appear inside it bending at the edges as if seen through the glass, then straighten as we come out the other side. It happens at 1.6 into the lecture room, and at 2.3 into the factory. The glass is not a prop, it is the grammar of the film: he looks at something and we go inside it.

What changed from version three

The runner

New character, and the film now opens on his face in close up rather than a wide. Empathy before curiosity: the audience feels him before they wonder about him.

The format

Fifty composite shots became a moving comic strip. Characters speak in bubbles instead of being animated. No lip sync, no walk cycles, no character animation.

The script

Cut from 311 words to 192. Where the picture already said it, the voice stopped saying it. The chalkboard writes the chain, so nobody narrates the chain. The stamp reads CASE CLOSED, so nobody says case closed.

The silence

There are now 25 frames with no words at all. In version two the film was 157 seconds of speech in a 120 second film, which was impossible.

The bubbles

Every bubble is also spoken aloud, so nobody has to read anything on screen. The character voices are cast, directed and already recorded.

The booth

A new setup and a new layer. See the previous page.

Delivery

Artwork arrives finished and in separate layers: background alone, each character as a transparent PNG, bubbles empty so the font is yours, and a placeholder marking where Manan goes.

The shooting day

A Grey backdrop, walking and reacting

Soft key from camera RIGHT at forty five degrees. Fill from the left at half strength. Eye level on sticks, locked off. This is the setup the film lives in. He is cut out of this grey and placed inside drawn worlds, so keep clear space around him on all four sides and never relight between frames. Frames 1.4, 1.5, 2.5, 3.2, 3.3, 3.4, 3.5.

B Standing eyeline, reacting to Coach Brain

Same lighting as A, unchanged. Key from camera RIGHT. CORRECTED 19.8.2026 from seated to STANDING, against the footage. In version four, the comic strip, Manan stands throughout the film and it is Coach Brain who sits. The earlier wording said seated eyeline and was wrong. Ball on a stand at his standing eye height, camera left, for the mark. Do not relight, only move the mark. Coach Brain is drawn in later. Frames 4.2, 4.5, 4.8, 4.9.

C White void, still, to lens

Flat even light both sides, no modelling, no shadow on the backdrop. The end of the film. He is still, dead to lens, and the world has fallen away behind him. Frames 7.2, 8.1, 8.2, 8.3, 8.4, 8.5.

D Jump, high frame rate. Optional, five minutes.

Same as C. Wider, room above his head. Only if the day allows it. Nothing depends on it. Optional.

E His room, at his desk

Warm window light, no lamps fighting it. A real room, shot as it is. These frames are NOT on grey and are not cut out. Frames 2.3, 4.6, 5.3.

F His room, at the blackboard

Same warm window light, standing. A real blackboard, shot completely clean except for one vertical chalk line down the middle. He writes with real chalk. Everything that appears written is added later, so it does not matter what he writes, only that his arm genuinely moves in front of it. Give a clean locked off pass of the empty board with no Manan, five seconds. Frames 2.1.

G His room, on the stationary bike

Same warm window light. Wide, closer, close. NOT on grey. A stationary bike that stays in one place, ideally with a solid wheel and handlebars that do not move, because the line this scene turns on is that nothing about his legs changed. Frames 5.5, 5.6, 5.7, 5.8.

H The booth

One warm light low and behind him, everything else falling away. A small room made dark. Music stand with the script pages, microphone on a stand, headphones. He reads as a silhouette and the page is the only lit thing. His face does not need to read. Three or four shots. Voice only. Frames 8.6.

EXT One quiet road, early morning

Whatever the morning gives. Early, before the traffic. Riding hard, side on, a real road. Thirty minutes. The only exterior in the film. Frames 5.4.

PROPS

Neutral mid dark grey background, about hex 3A3B3D, matte, one stop darker than his hoodie, and he stands at least a metre and a half in front of it. Tennis ball on a stand. Brass magnifying glass. A real blackboard and white chalk. A stationary exercise bike. A bicycle and a plain dark helmet. A small gold key. A ball at chest height for the lever insert. His own phone and laptop. Music stand, microphone on a stand, headphones, printed script pages.

WARDROBE

Grey hoodie everywhere, except on the stationary bike where he is in a plain dark t shirt. He rides the road in the hoodie, comes back sweating, takes it off. Plain mid grey, no logos.

THE MYSTERY



1.1 DRAWN

00:00:00:00 00:00:03:16 91 fr



1.2 DRAWN

00:00:03:16 00:00:04:01 10 fr



1.3 DRAWN

00:00:04:01 00:00:04:11 10 fr

MANAN, VOICE OVER

For a hundred years we blamed the muscles.

BUILD

Animation only. Nobody on the shooting day.

NO WORDS

Let it hold. The picture is doing it.

BUILD

Animation only. Nobody on the shooting day.

NO WORDS

Let it hold. The picture is doing it.

BUILD

Animation only. Nobody on the shooting day.



1.4 LIVE ACTION IN A DRAWN PANEL

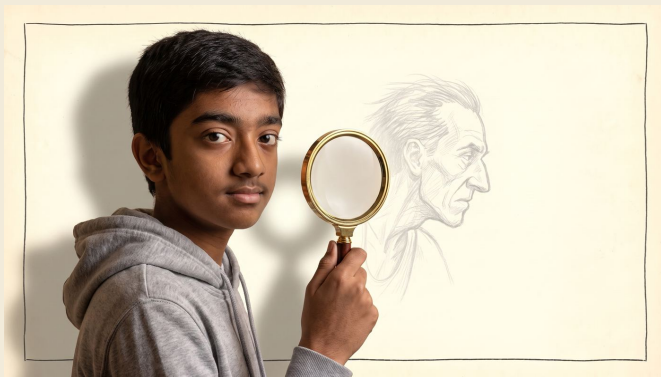
00:00:04:11 00:00:04:21 10 fr

NO WORDS

Let it hold. The picture is doing it.

BUILD

Manan filmed against grey, cut out, placed in the drawn panel. His shadow is drawn onto the paper.



1.5 LIVE ACTION IN A DRAWN PANEL

00:00:04:21 00:00:10:05 134 fr

MANAN, TO CAMERA

Hold on. He had nothing left. So where did THAT come from?

BUILD

Manan filmed against grey, cut out, placed in the drawn panel. His shadow is drawn onto the paper.

TRANSITION

THROUGH THE GLASS. Push in on the lens until the circle fills the frame. The next scene, the lecture room of 1923, appears inside the glass, bending at the edges as if seen through it, then straightens as we come out the other side into 2.1.

THE OLD THEORY



2.1 LIVE ACTION IN A DRAWN PANEL

00:00:10:05 00:00:13:00 70 fr



2.2 DRAWN

00:00:13:00 00:00:13:10 10 fr



2.3 LIVE ACTION IN A DRAWN PANEL

00:00:13:10 00:00:13:20 10 fr

MANAN, VOICE OVER

A. V. Hill. Nineteen twenty three.

BUILD

Manan filmed against grey, cut out, placed in the drawn panel. His shadow is drawn onto the paper.

TRANSITION

THE BOARD IS SHOT COMPLETELY EMPTY except for one vertical chalk line down the middle. Everything else is composited afterwards. Manan must actually write on it on the day, so the chalk in his hand moves and his arm passes in front of the writing. The left half carries a quick chalk sketch of A. V. Hill and his year. The right half carries 1997, T. Noakes, and the new chain.

NO WORDS

Let it hold. The picture is doing it.

BUILD

Animation only. Nobody on the shooting day.

TRANSITION

Push in on the left half of the board from 2.1. Same board, same chalk, same handwriting, so it must read as the same hand that just wrote it. Nothing new appears, we simply move closer.

NO WORDS

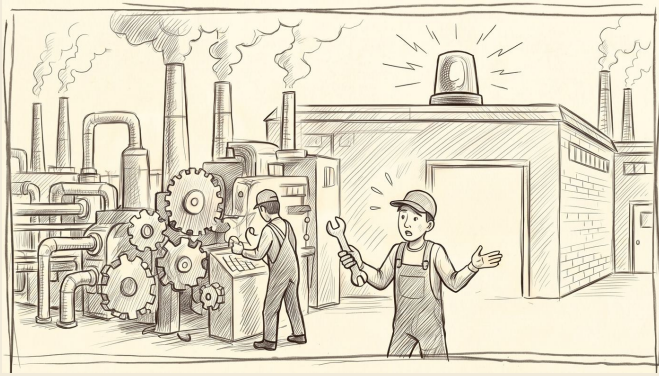
Let it hold. The picture is doing it.

BUILD

Manan filmed against grey, cut out, placed in the drawn panel. His shadow is drawn onto the paper.

TRANSITION

THROUGH THE GLASS. Same move. The factory inside the lens grows until the circle fills the frame and we are inside the factory for 2.4.



2.4 DRAWN

00:00:13:20 00:00:15:17 47 fr

WORKER, SPEECH BUBBLE

That's it. We're done.

recorded. bubble empty in the artwork, set the type yourself.

BUILD

Animation only. Nobody on the shooting day.



2.5 LIVE ACTION IN A DRAWN PANEL

00:00:15:17 00:00:18:01 59 fr

MANAN, VOICE OVER

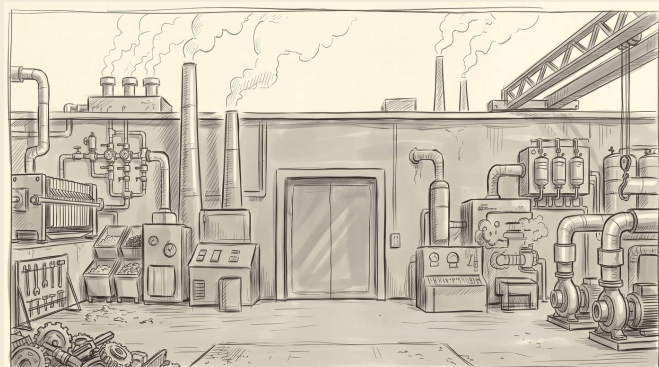
Except it doesn't explain this.

BUILD

Manan filmed against grey, cut out, placed in the drawn panel. His shadow is drawn onto the paper.

SCENE 3 OF 8 • 00:00:18:01 to 00:00:31:13

THE FULL TANK



3.1 DRAWN

00:00:18:01 00:00:18:11 10 fr

NO WORDS

Let it hold. The picture is doing it.

BUILD

Animation only. Nobody on the shooting day.



3.2 LIVE ACTION IN A DRAWN PANEL

00:00:18:11 00:00:21:17 81 fr

MANAN, VOICE OVER

At the back, a door nobody opens.

BUILD

Manan filmed against grey, cut out, placed in the drawn panel. His shadow is drawn onto the paper.



3.3 LIVE ACTION IN A DRAWN PANEL

00:00:21:17 00:00:22:02 10 fr

NO WORDS

Let it hold. The picture is doing it.

BUILD

Manan filmed against grey, cut out, placed in the drawn panel. His shadow is drawn onto the paper.



3.4 LIVE ACTION IN A DRAWN PANEL

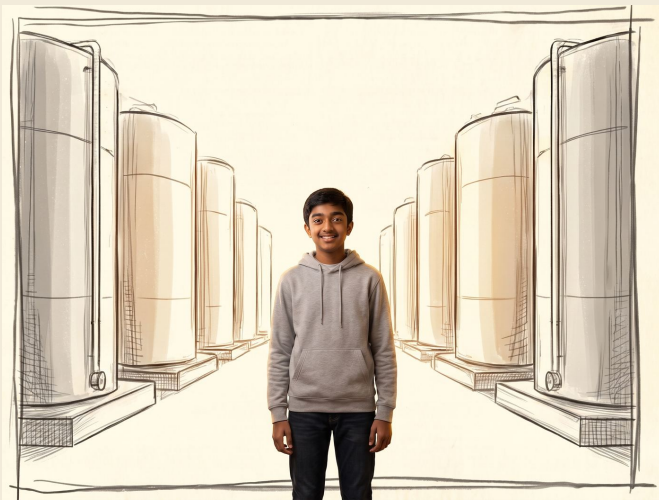
00:00:22:02 00:00:27:22 145 fr

MANAN, VOICE OVER

Tested the moment they gave up, the muscles could still do far more.

BUILD

Manan filmed against grey, cut out, placed in the drawn panel. His shadow is drawn onto the paper.



3.5 LIVE ACTION IN A DRAWN PANEL

00:00:27:22 00:00:31:13 91 fr

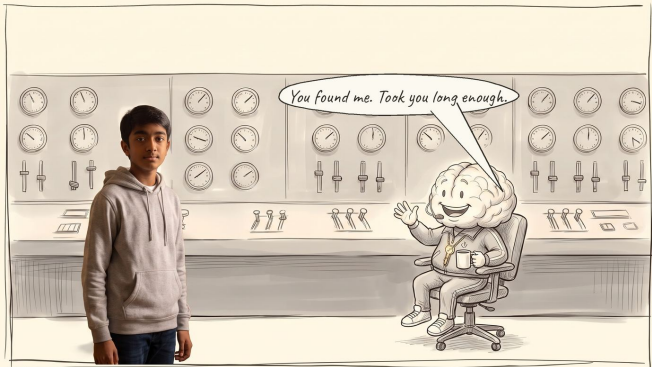
MANAN, TO CAMERA

It was never empty. Somebody closed that door.

BUILD

Manan filmed against grey, cut out, placed in the drawn panel. His shadow is drawn onto the paper.

THE GATEKEEPER



4.1 STRIP PANEL, BUBBLE

00:00:31:13 00:00:34:14 76 fr

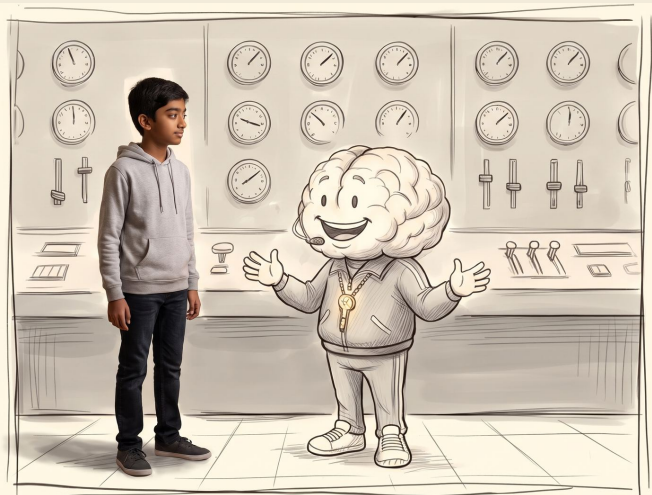
COACH BRAIN, SPEECH BUBBLE

You found me. Took you long enough.

recorded. bubble empty in the artwork, set the type yourself.

BUILD

Background, character and bubble are delivered as separate layers.



4.2 LIVE ACTION IN A DRAWN PANEL

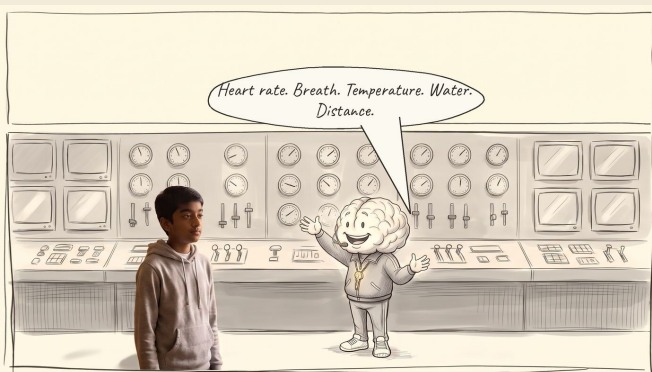
00:00:34:14 00:00:36:12 48 fr

MANAN, TO CAMERA

You closed that door.

BUILD

Manan filmed against grey, cut out, placed in the drawn panel. His shadow is drawn onto the paper.



4.3 STRIP PANEL, BUBBLE

00:00:36:12 00:00:41:10 123 fr

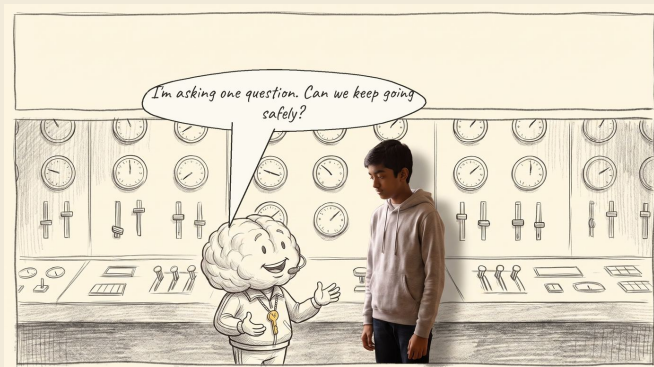
COACH BRAIN, SPEECH BUBBLE

Heart rate. Breath. Temperature. Water. Distance.

recorded. bubble empty in the artwork, set the type yourself.

BUILD

Background, character and bubble are delivered as separate layers.



4.4 STRIP PANEL, BUBBLE

00:00:41:10 00:00:46:12 127 fr

COACH BRAIN, SPEECH BUBBLE

I'm asking one question. Can we keep going safely?

recorded. bubble empty in the artwork, set the type yourself.

BUILD

Background, character and bubble are delivered as separate layers.

MANAN, TO CAMERA

So you're secretly pacing me?

BUILD

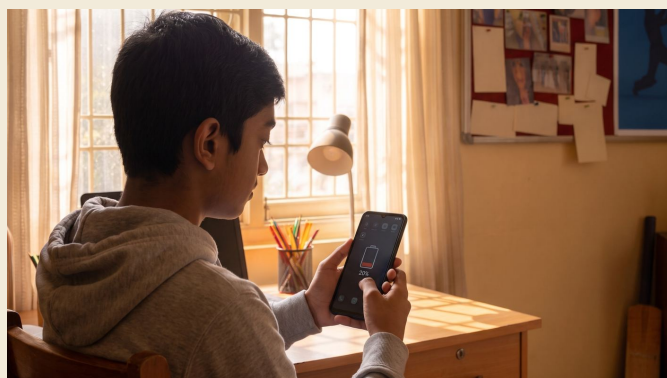
Manan filmed against grey, cut out, placed in the drawn panel. His shadow is drawn onto the paper.

TRANSITION

TO SHOOT 18 AUG. Manan to camera, same setup and same eyeline as 4.2, one step closer. He is not accusing now, he is working it out. The question lands and he holds it.

4.5 LIVE ACTION IN A DRAWN PANEL

00:00:46:12 00:00:49:04 67 fr



4.6 LIVE ACTION IN A DRAWN PANEL

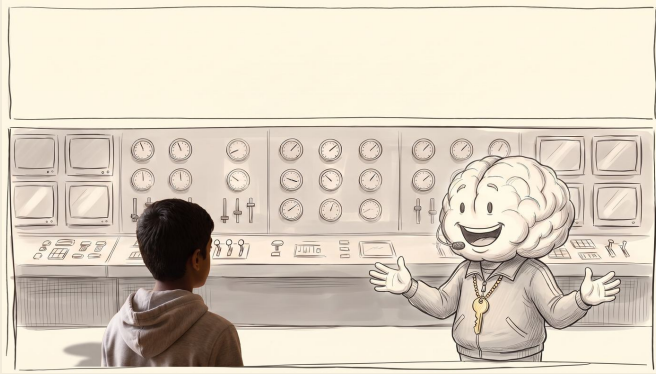
00:00:49:04 00:00:53:17 113 fr

MANAN, VOICE OVER

Like a phone at twenty percent. Not broken. Protecting itself.

BUILD

Manan filmed against grey, cut out, placed in the drawn panel. His shadow is drawn onto the paper.



4.7 STRIP PANEL, BUBBLE

00:00:53:17 00:00:59:16 149 fr

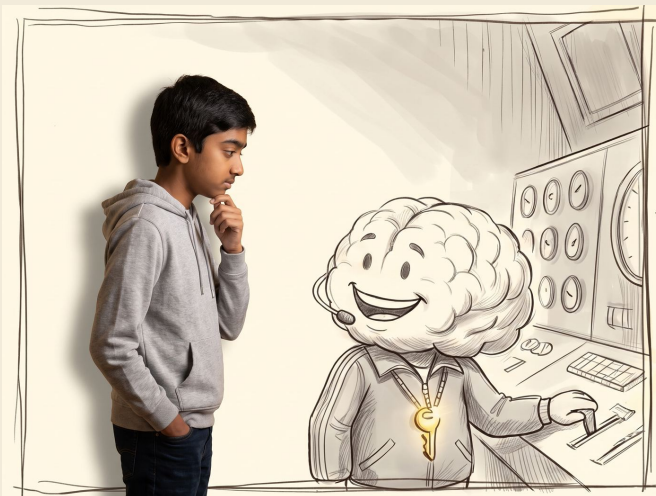
COACH BRAIN, SPEECH BUBBLE

**Fatigue isn't your body failing.
It's me slowing you down before
real danger.**

recorded. bubble empty in the artwork, set the type yourself.

BUILD

Background, character and bubble are delivered as separate layers.



4.8 LIVE ACTION IN A DRAWN PANEL

00:00:59:16 00:01:06:19 178 fr

MANAN, TO CAMERA

**So the limit isn't my body. It's your
judgement. They call it the Central
Governor Theory.**

BUILD

Manan filmed against grey, cut out, placed in the drawn panel. His shadow is drawn onto the paper.

TRANSITION

ON SCREEN SUBTITLE, small, low in frame, held two seconds, nobody speaks it:

"Central Governor Theory, proposed by Prof. Tim Noakes, 1997. An influential model. Scientists are still investigating how the brain and muscles produce fatigue."

It costs no running time because it is not spoken, and it is what protects the film on scientific accuracy.

4.9 LIVE ACTION IN A DRAWN PANEL

00:01:06:19 00:01:12:09 140 fr

MANAN, TO CAMERA

**It sets your limit in advance, and
keeps something in reserve.**

BUILD

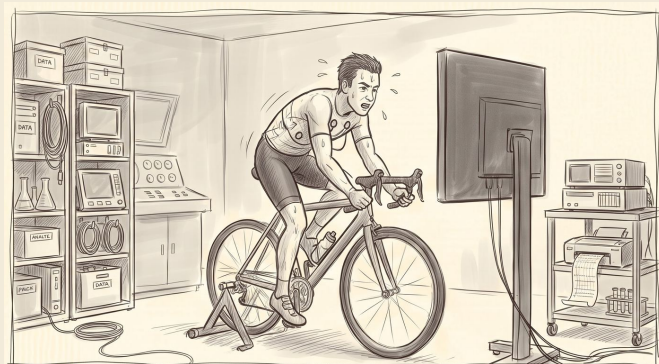
Manan filmed against grey, cut out, placed in the drawn panel. His shadow is drawn onto the paper.

TRANSITION

TO SHOOT 18 AUG. Direct continuation of 4.7, identical setup, identical light, cut on the same breath so the two panels read as one take. This is the only sentence in the film that states the science plainly, so he says it slowly and to camera. Noakes and 1997 stay on the lower third underneath.

SCENE 5 OF 8 • 00:01:12:09 to 00:01:28:20

THE EXPERIMENT



5.1 DRAWN

00:01:12:09 00:01:16:00 91 fr

MANAN, VOICE OVER

They let him race his own best ride.

BUILD

Animation only. Nobody on the shooting day.



5.2 DRAWN

00:01:16:00 00:01:20:02 102 fr

MANAN, VOICE OVER

He beat it. So it was never his maximum.

BUILD

Animation only. Nobody on the shooting day.



5.3 LIVE ACTION IN A DRAWN PANEL

00:01:20:02 00:01:20:12 10 fr

NO WORDS

Let it hold. The picture is doing it.

BUILD

Manan filmed against grey, cut out, placed in the drawn panel. His shadow is drawn onto the paper.



5.4 LIVE ACTION IN A DRAWN PANEL

00:01:20:12 00:01:22:10 48 fr

MANAN, VOICE OVER
So I tried it.

BUILD

Manan filmed against grey, cut out, placed in the drawn panel. His shadow is drawn onto the paper.



5.5 LIVE ACTION IN A DRAWN PANEL

00:01:22:10 00:01:22:20 10 fr

NO WORDS

Let it hold. The picture is doing it.

BUILD

Manan filmed against grey, cut out, placed in the drawn panel. His shadow is drawn onto the paper.



5.6 LIVE ACTION IN A DRAWN PANEL

00:01:22:20 00:01:23:05 10 fr

NO WORDS

Let it hold. The picture is doing it.

BUILD

Manan filmed against grey, cut out, placed in the drawn panel. His shadow is drawn onto the paper.



5.7 LIVE ACTION IN A DRAWN PANEL

00:01:23:05 00:01:25:14 59 fr

MANAN, VOICE OVER

Nothing about my legs changed.

BUILD

Manan filmed against grey, cut out, placed in the drawn panel. His shadow is drawn onto the paper.



5.8 LIVE ACTION IN A DRAWN PANEL

00:01:25:14 00:01:28:20 81 fr

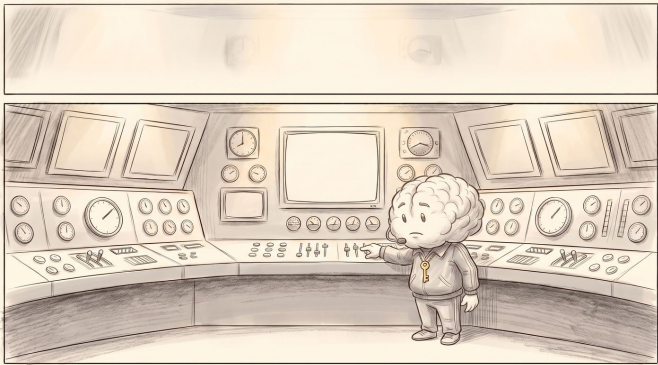
MANAN, TO CAMERA

Only what I believed they had left.

BUILD

Manan filmed against grey, cut out, placed in the drawn panel. His shadow is drawn onto the paper.

THE RELEASE



6.1 STRIP PANEL, BUBBLE

00:01:28:20 00:01:33:07 112 fr

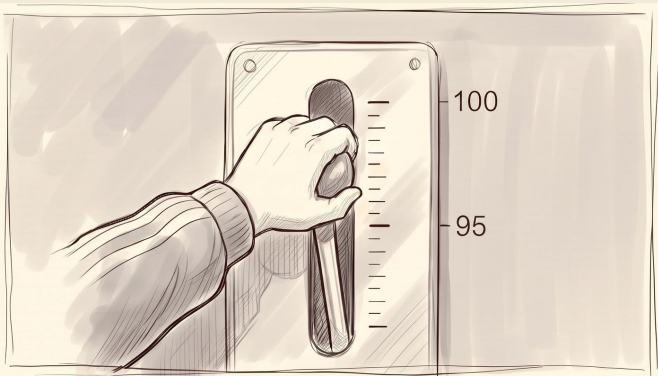
COACH BRAIN, SPEECH BUBBLE

**All right. Everything's holding.
Let's give him a little more.**

recorded. bubble empty in the artwork, set the type yourself.

BUILD

Background, character and bubble are delivered as separate layers.



6.2 DRAWN

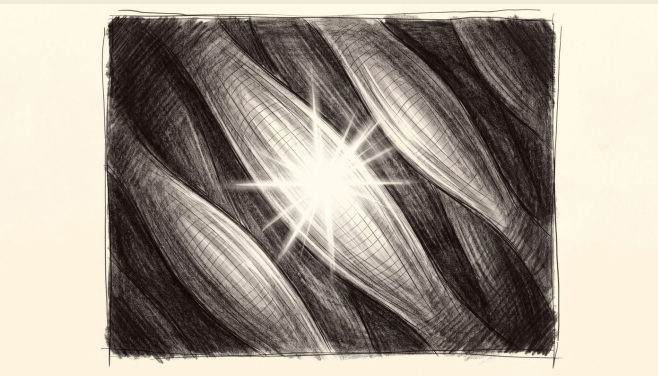
00:01:33:07 00:01:33:17 10 fr

NO WORDS

Let it hold. The picture is doing it.

BUILD

Animation only. Nobody on the shooting day.



6.3 DRAWN

00:01:33:17 00:01:34:02 10 fr

NO WORDS

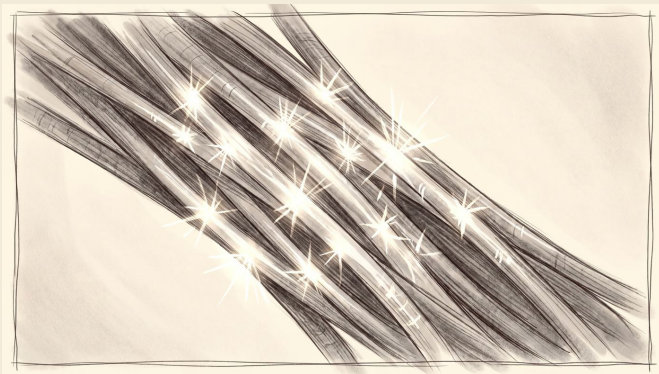
Let it hold. The picture is doing it.

BUILD

Animation only. Nobody on the shooting day.

TRANSITION

THE PULL BACK BEGINS HERE. 6.4 to 6.9 are one continuous move backwards through the same body. Never cut. Each frame is a further step out from the one before, and the light spreads as we go.



6.4 DRAWN

00:01:34:02 00:01:34:12 10 fr

NO WORDS

Let it hold. The picture is doing it.

BUILD

Animation only. Nobody on the shooting day.



6.5 DRAWN

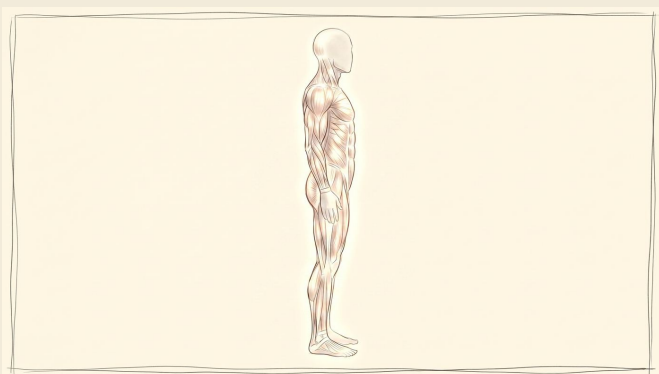
00:01:34:12 00:01:34:22 10 fr

NO WORDS

Let it hold. The picture is doing it.

BUILD

Animation only. Nobody on the shooting day.



6.6 DRAWN

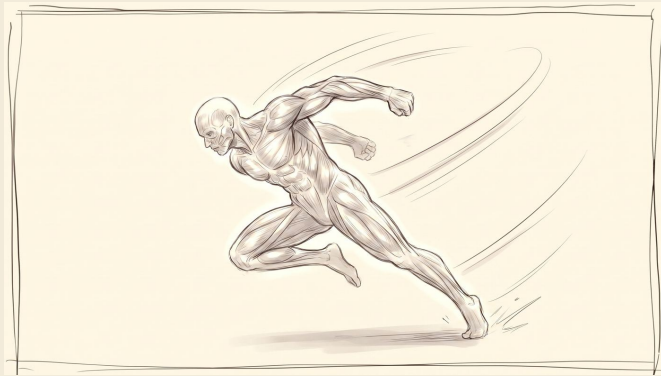
00:01:34:22 00:01:35:07 10 fr

NO WORDS

Let it hold. The picture is doing it.

BUILD

Animation only. Nobody on the shooting day.



6.7 DRAWN

00:01:35:07 00:01:35:17 10 fr

NO WORDS

Let it hold. The picture is doing it.

BUILD

Animation only. Nobody on the shooting day.



6.8 DRAWN

00:01:35:17 00:01:39:08 91 fr

MANAN, VOICE OVER

It didn't make new energy. It gave permission.

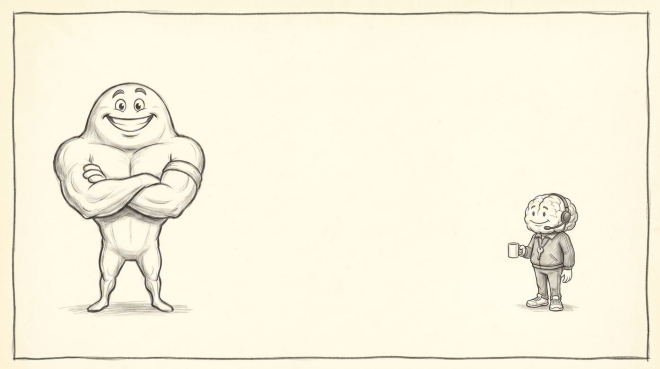
BUILD

Animation only. Nobody on the shooting day.

TRANSITION

THE PULL BACK ENDS. The glowing muscular structure becomes a young man in clothes, mid leap between rooftops, the light fading out of him as he goes. One body, one move, from a single fibre to a man flying. Accelerate through the whole run.

THE VERDICT



7.1 DRAWN

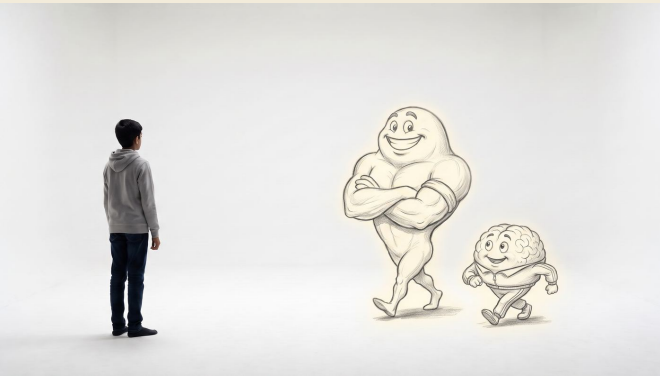
00:01:39:08 00:01:39:18 10 fr

NO WORDS

Let it hold. The picture is doing it.

BUILD

Animation only. Nobody on the shooting day.



7.2 LIVE ACTION IN A DRAWN PANEL

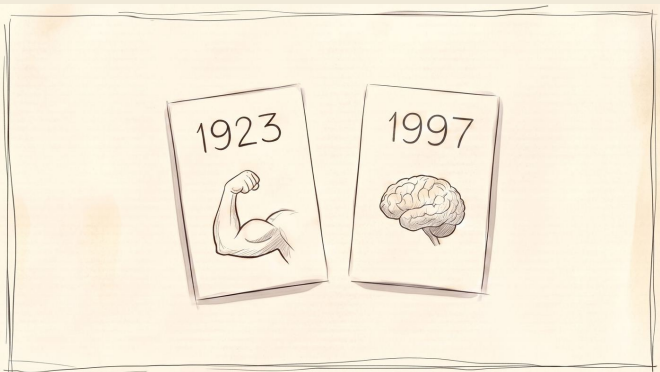
00:01:39:18 00:01:40:03 10 fr

NO WORDS

Let it hold. The picture is doing it.

BUILD

Manan filmed against grey, cut out, placed in the drawn panel. His shadow is drawn onto the paper.



7.3 DRAWN

00:01:40:03 00:01:40:13 10 fr

NO WORDS

Let it hold. The picture is doing it.

BUILD

Animation only. Nobody on the shooting day.

THE INVITATION



8.1 LIVE ACTION IN A DRAWN PANEL

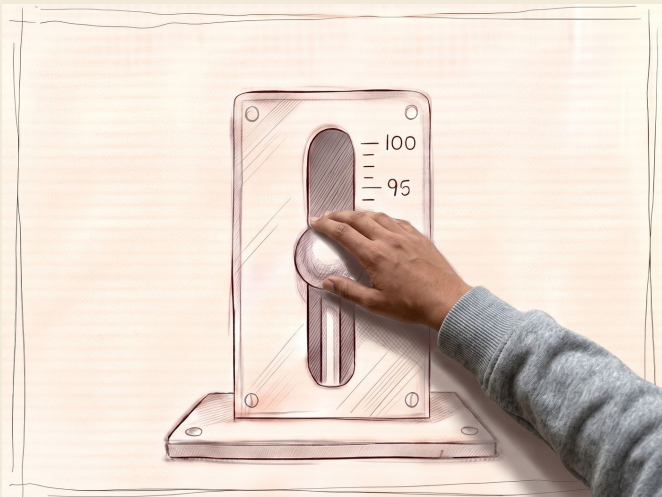
00:01:40:13 00:01:40:23 10 fr

NO WORDS

Let it hold. The picture is doing it.

BUILD

Manan filmed against grey, cut out, placed in the drawn panel. His shadow is drawn onto the paper.



8.2 LIVE ACTION IN A DRAWN PANEL

00:01:40:23 00:01:41:08 10 fr

NO WORDS

Let it hold. The picture is doing it.

BUILD

Manan filmed against grey, cut out, placed in the drawn panel. His shadow is drawn onto the paper.



8.3 LIVE ACTION IN A DRAWN PANEL

00:01:41:08 00:01:45:24 116 fr

MANAN, TO CAMERA

Next time somebody finds one last burst of speed,

BUILD

Manan filmed against grey, cut out, placed in the drawn panel. His shadow is drawn onto the paper.

TRANSITION

Image inherited from the retired 8.5. The key in his hand, held up, the setup line of the closing triplet. He is already looking at us before he speaks.



8.4 LIVE ACTION IN A DRAWN PANEL

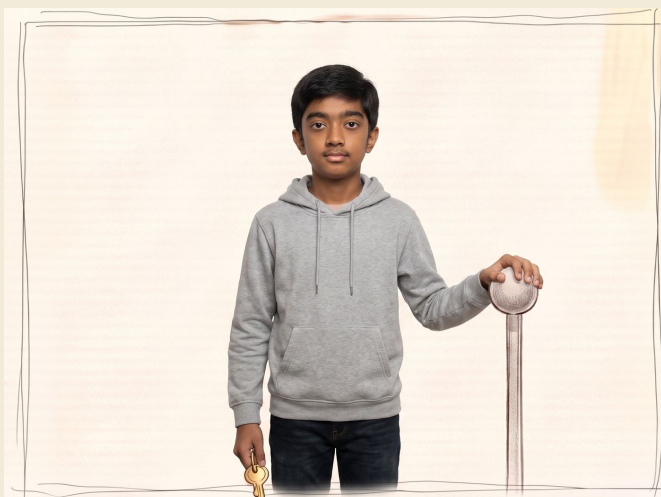
00:01:45:24 00:01:50:03 104 fr

MANAN, TO CAMERA

don't just wonder how strong their muscles are.

BUILD

Manan filmed against grey, cut out, placed in the drawn panel. His shadow is drawn onto the paper.



8.5 LIVE ACTION IN A DRAWN PANEL

00:01:50:03 00:01:53:19 91 fr

MANAN, TO CAMERA

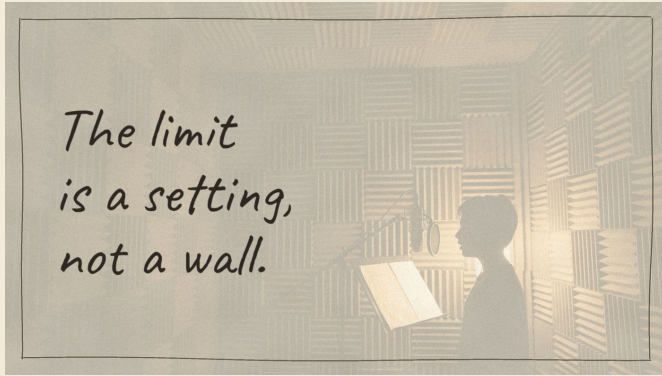
Wonder what their brain believed was safe.

BUILD

Manan filmed against grey, cut out, placed in the drawn panel. His shadow is drawn onto the paper.

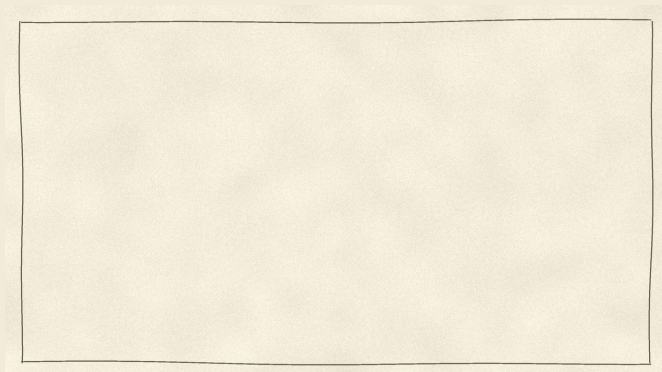
TRANSITION

The payoff of the triplet. Eyes open, dead to camera, no movement. The last thing he says before the paper writes itself.



8.6 THE BOOTH

00:01:53:19 00:01:57:10 91 fr



8.7 DRAWN

00:01:57:10 00:01:57:20 10 fr

MANAN, VOICE OVER

The limit is a setting, not a wall.

BUILD

The booth setup. Silhouette, backlit, page lit.

TRANSITION

THE WORDS ARRIVE AS HE SPEAKS THEM. Nothing is on the paper when the frame opens. Each word is written on, in his own hand, in time with his voice, as though somebody is writing while he reads. Finish the last word, hold, then the sheet goes blank.

NO WORDS

Let it hold. The picture is doing it.

BUILD

Animation only. Nobody on the shooting day.

*The limit
is a setting,
not a wall.*



THE LAST FRAME BUT ONE · then the sheet goes blank

*Everything collapses into one plane. The drawn boy breathing, the two theories
ghosted at the edges, and the real boy's shadow reading it into being.
The sentence is hand drawn, because everything explained in this film is drawn.
Then the sheet goes blank, and we are back at the beginning.*