

# 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

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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

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## **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

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## **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 1.5, 1.6, 2.6, 3.2, 3.3, 3.4, 3.6.

## **B Seated eyeline, reacting to Coach Brain**

Same lighting as A, unchanged. Key from camera RIGHT. Tennis ball on a stand at seated height, camera left, for his eyeline. Do not relight, only move the mark. Coach Brain is drawn in later and stands to his left. Frames 4.2, 4.4b, 4.7, 4.8.

## **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 7.3, 8.1, 8.3, 8.6, 8.7, 8.8.

## **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, 4.5, 5.4.

## **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 5.6, 5.7, 5.8, 5.9.

## **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 8.9.

## **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 5.5.

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## **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.



### 1.5 LIVE ACTION IN A DRAWN PANEL

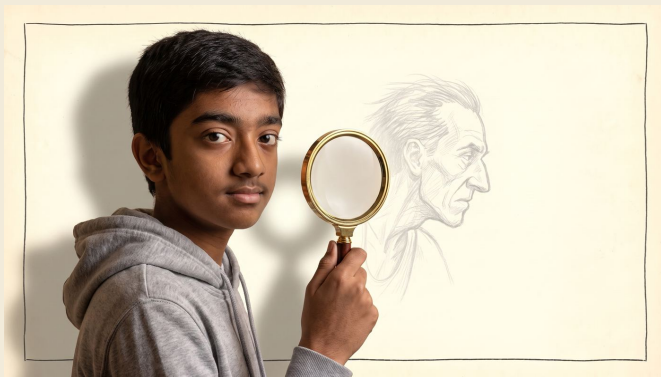
00:00:04:11 00:00:04:21 10 fr

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.



### 1.6 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.*

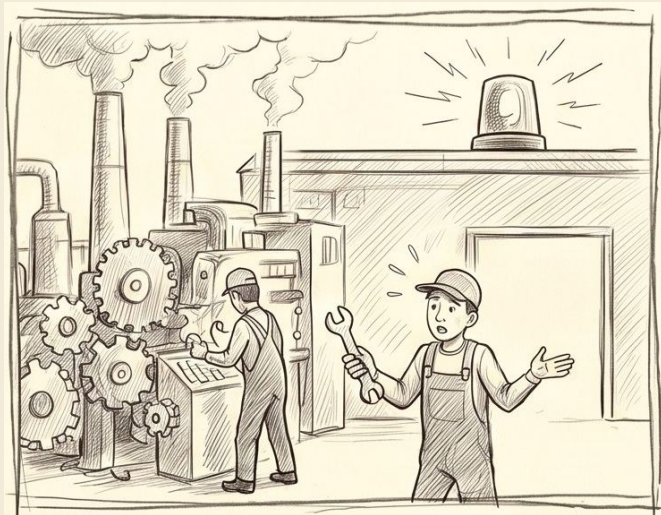
**BUILD**  
Animation only. Nobody on the shooting day.

**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.



2.6 LIVE ACTION IN A DRAWN PANEL

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

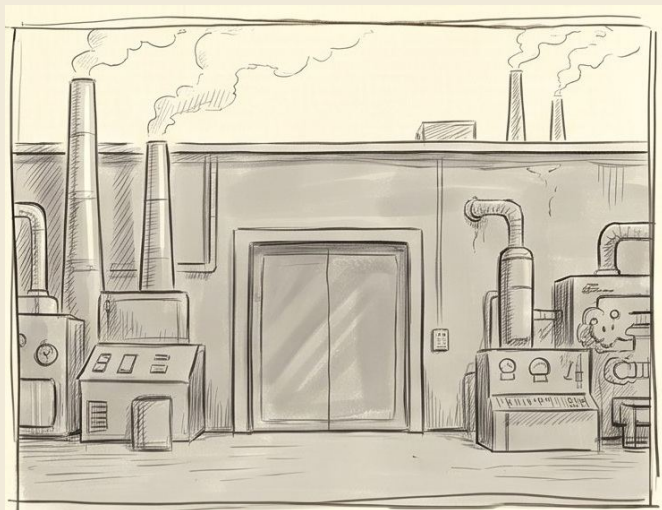
MANAN, VOICE OVER

**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.

# THE FULL TANK



## 3.1 DRAWN

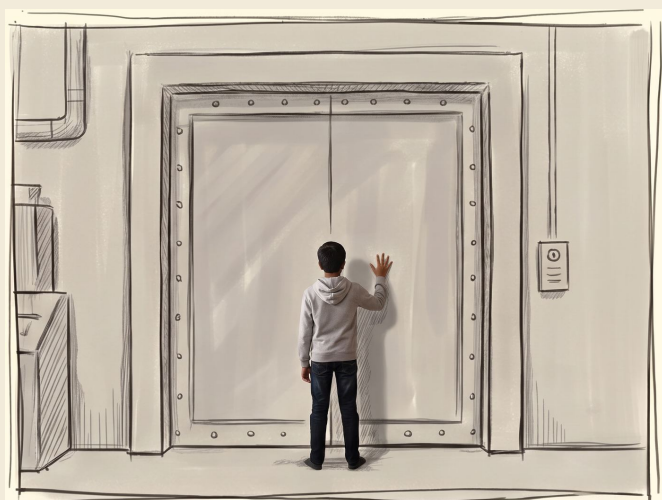
00:00:18:01 00:00:18:11 10 fr

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

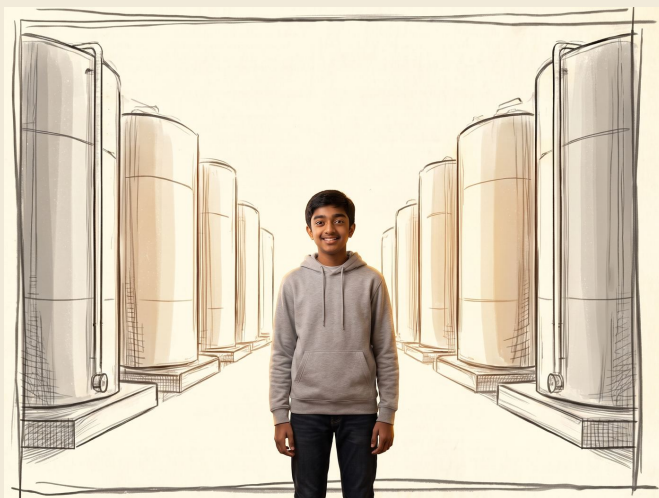
00:00:22:02 00:00:27:22 145 fr

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.



### 3.6 LIVE ACTION IN A DRAWN PANEL

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

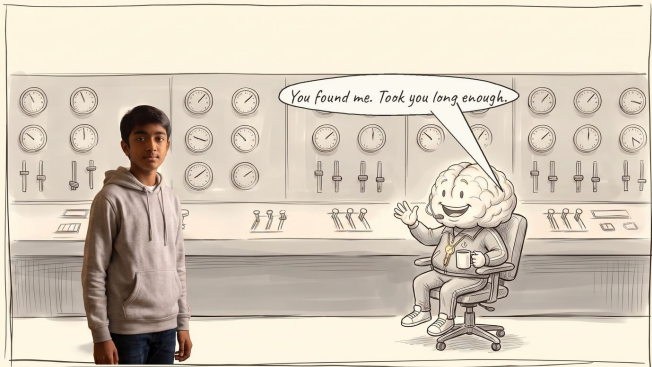
MANAN, TO CAMERA

**It was never empty. Somebody closed that door.**

**BUILD**

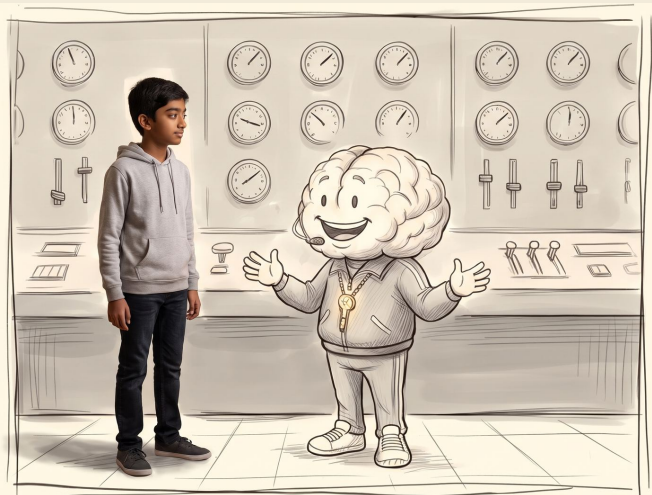
Manan filmed against grey, cut out, placed in the drawn panel. His shadow is drawn onto the paper.

# THE GATEKEEPER



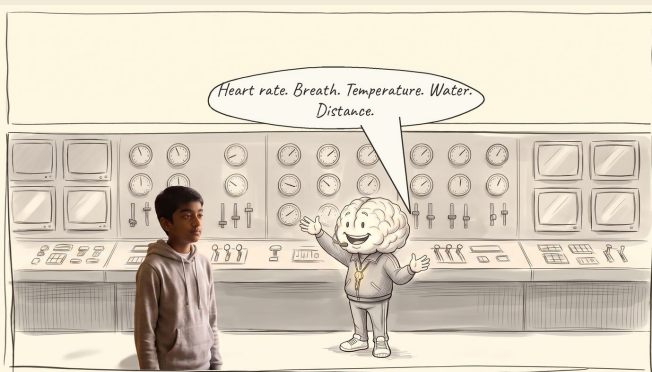
## 4.1 STRIP PANEL, BUBBLE

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



## 4.2 LIVE ACTION IN A DRAWN PANEL

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



## 4.3 STRIP PANEL, BUBBLE

00:00:36:12 00:00:41:10 123 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.

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.

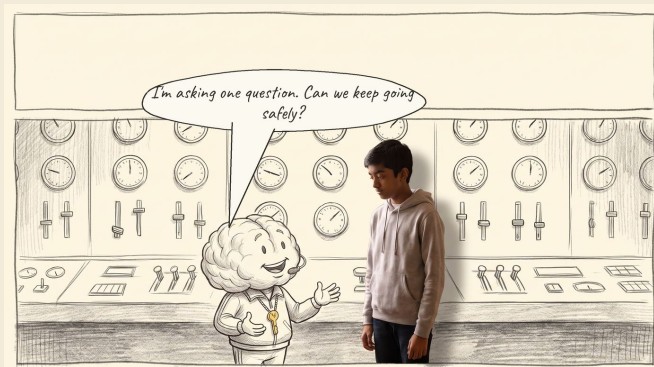
COACH BRAIN, SPEECH BUBBLE

**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.

#### 4.4b LIVE ACTION IN A DRAWN PANEL

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



#### 4.5 LIVE ACTION IN A DRAWN PANEL

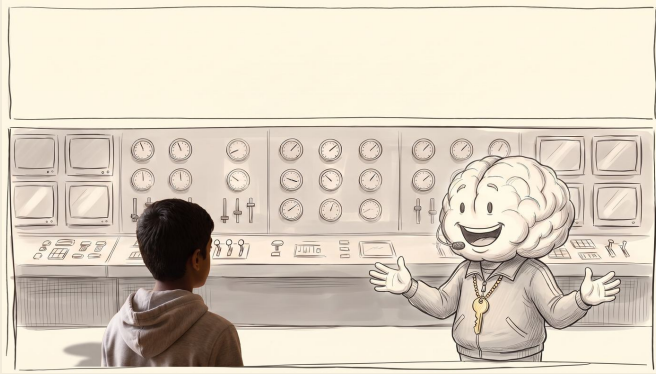
00:00:49:04 00:00:53:17 113 fr

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.



#### 4.6 STRIP PANEL, BUBBLE

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

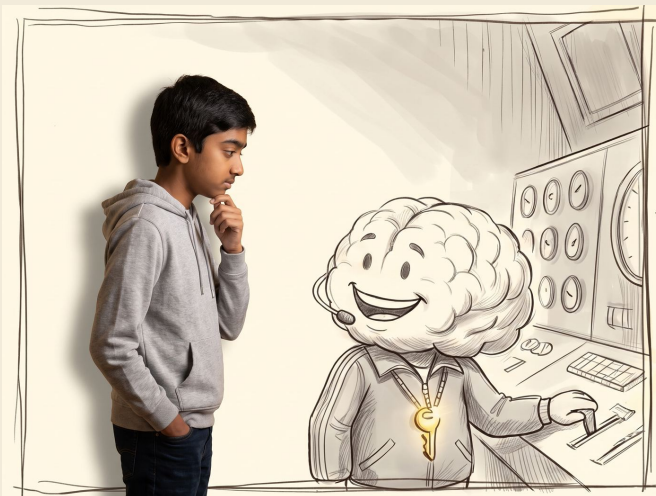
#### COACH BRAIN, SPEECH BUBBLE

**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.



#### 4.7 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.

#### 4.8 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.

# 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.



5.3 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.



5.4 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.



### 5.5 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.



### 5.6 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.



### 5.7 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.



**5.8** 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.



**5.9** LIVE ACTION IN A DRAWN PANEL

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

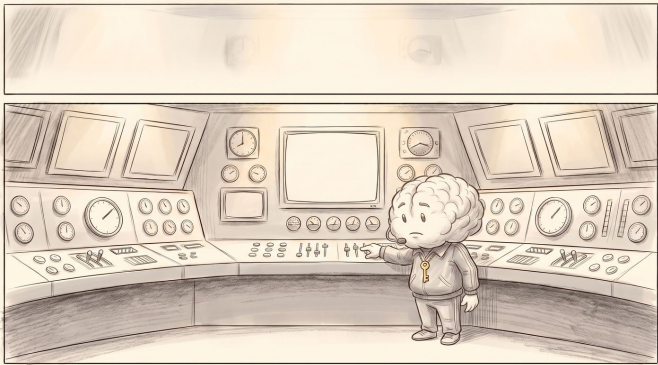
MANAN, TO CAMERA

**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.

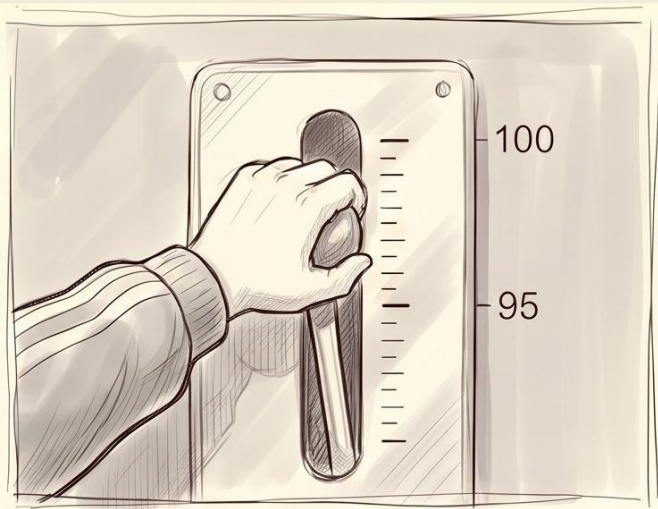
# THE RELEASE



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.

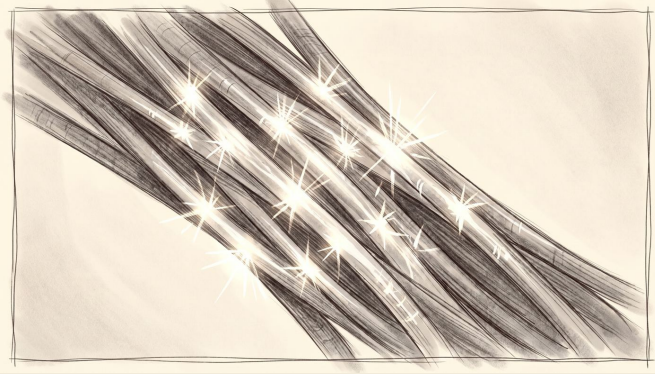


6.4 DRAWN  
00:01:33:17 00:01:34:02 10 fr

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.



**6.5** 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.



**6.6** DRAWN

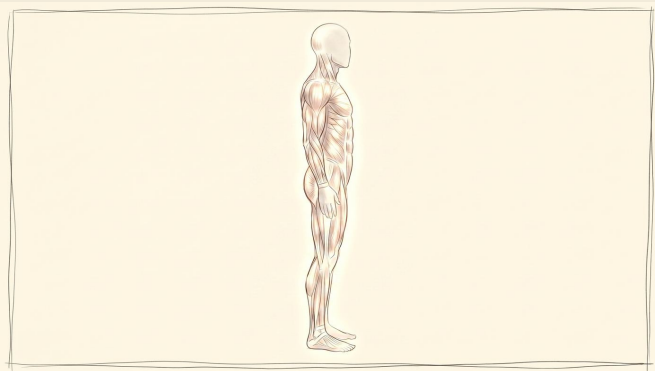
00:01:34:12 00:01:34:22 10 fr

NO WORDS

*Let it hold. The picture is doing it.*

**BUILD**

Animation only. Nobody on the shooting day.



**6.7** DRAWN

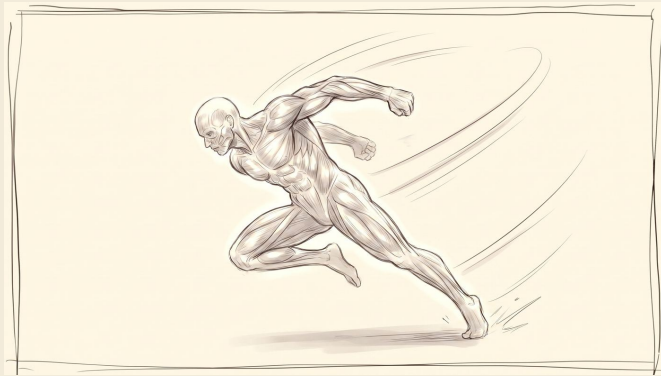
00:01:34:22 00:01:35:07 10 fr

NO WORDS

*Let it hold. The picture is doing it.*

**BUILD**

Animation only. Nobody on the shooting day.



6.8 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.



6.9 DRAWN

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

MANAN, VOICE OVER

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

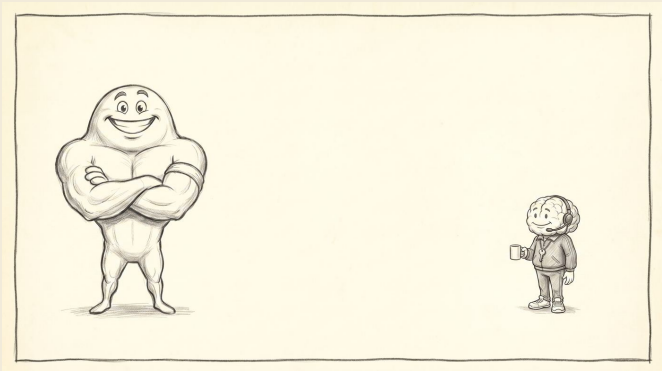
**BUILD**

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

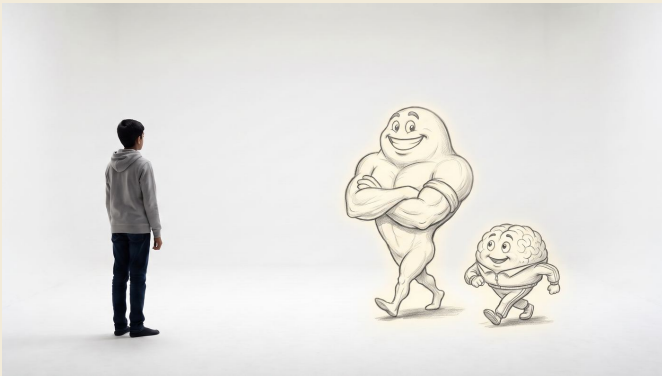
00:01:39:08 00:01:39:18 10 fr

NO WORDS

*Let it hold. The picture is doing it.*

BUILD

Animation only. Nobody on the shooting day.



7.3 LIVE ACTION IN A DRAWN PANEL

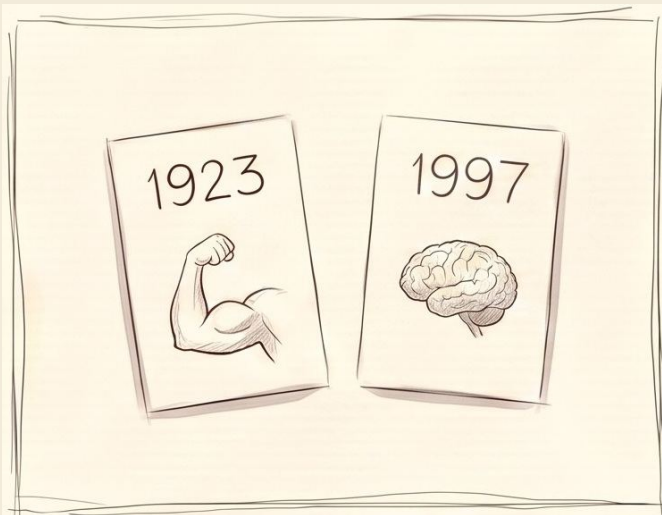
00:01:39:18 00:01:40:03 10 fr

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.



7.5 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

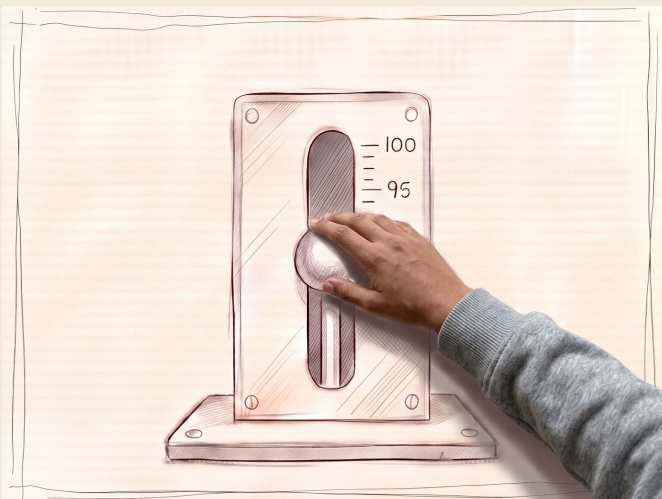
00:01:40:13 00:01:40:23 10 fr

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.



**8.3** 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.



#### 8.6 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.



#### 8.7 LIVE ACTION IN A DRAWN PANEL

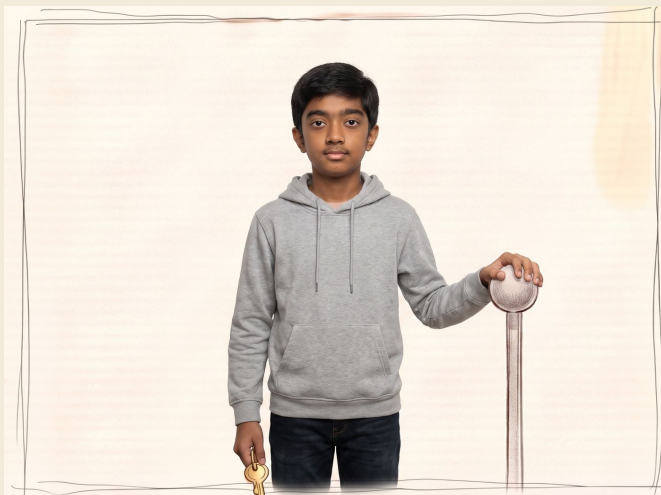
00:01:45:24 00:01:50:03 104 fr

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.



#### 8.8 LIVE ACTION IN A DRAWN PANEL

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

MANAN, TO CAMERA

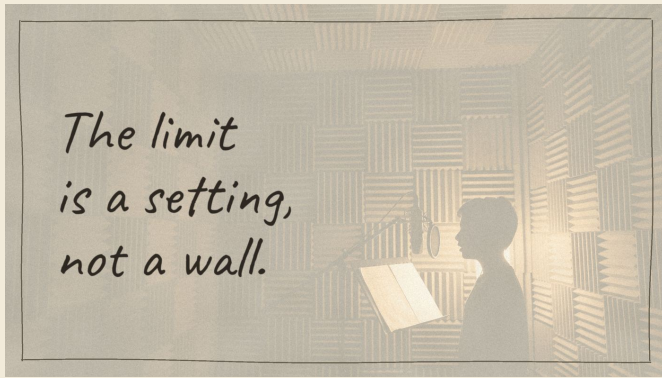
**Wonder what their brain believed was safe.**

BUILD

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

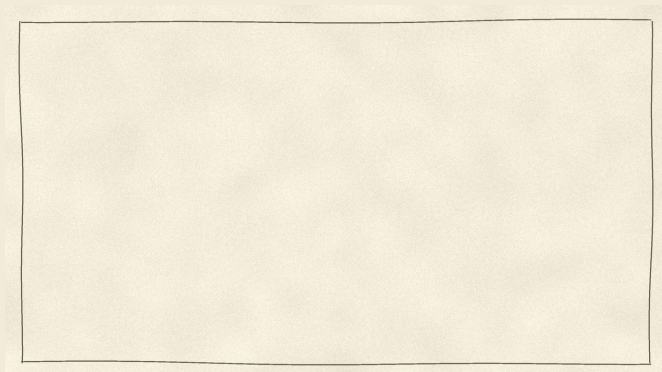
TRANSITION

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



## 8.9 THE BOOTH

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



## 8.10 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.*