Digital Physics

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MUSIC NOTE: THIS MOVIE SHOULD HAVE MANUEL GOTTSCHING'S MUSIC, AND OTHER EARLY AMBIENT SYNTH MUSIC, AS A MUSICAL SCORE.

EXT. OUTSKIRTS OF DECAYING CITY - DUSK

An old utility VAN drives through the countryside and into the city. We faintly hear the band inside the tour bus underneath the opening score.

INT. VAN - DUSK

KHATCHIG sits in the very back of a packed van, nestled between AMPS AND EQUIPMENT, with his face pressed up against the rear side window. He is reading a book entitled "BUILDING A UNIVERSAL TURING MACHINE." On the back of the book is a picture of the author, Dr. Mercury Jhaitin.

A hand from one of the band members who is sitting in the rear seat pokes out between the stacks of equipment and offers Khatchig a hit from a JOINT. We hear the BAND MEMBER on the other side of the wall of equipment.

BAND MEMBER

Dude.

The BAND MEMBER, not sure of where his hand is in relationship to Khatchig, waves the joint around in various directions thinking Khatchig has not seen it yet. Khatchig just stares at it and ducks out of the way when it comes close to hitting him.

CUT TO:

EXT. OUTSKIRTS OF DECAYING CITY - DUSK

The van is now driving through a slightly different city backdrop.

EXT. MUSIC VENUE - DECAYING STREET - DUSK/NIGHT

Khatchig is unloading the back of the van which is filled with amps, musical equipment, a PRIMITIVE LOOKING COMPUTER, and OTHER ELECTRONICS. Next to the computer is Khatchig's SUITCASE. BAND MEMBERS are getting out of the van and heading into the venue. One of the band members pulls an unwrapped SANDWICH out of his pocket and takes a bite right as another member pops a CIGARETTE in his mouth. Khatchig is coiling XLR CABLES.

INT. MUSIC VENUE - STAGE AREA - NIGHT

Sound check is going on. The venue is mostly empty. A MOOG SYNTHESIZER is being checked by one of the band members up on the stage.

Khatchig is setting up an old video camera that is pointing at the stage by the mixing booth area. A Swedish guy comes over and stands by Khatchig.

SWEDISH GUY

(Swedish accent)
You'll record this?

KHATCHIG

(continuing to work)
No, I'm in charge of the
projections. I rigged it up to
reverse the feed. It's a projector
now.

SWEDISH GUY

(Swedish accent)
She goes out through the in the door?

Khatchig stops setting up the camera. He cocks his head to the side and looks up out of the corner of his eyes in an inquisitive fashion. He nods unsure.

AUDIO TRANSITION

We see Khatchig in the mixing booth area. He is testing out the 80s-computer-green programs that are being projected onto a SCREEN that is the backdrop to the stage. We see a number of 80s-computer-green pyramid cellular automaton patterns run - rules 00000001, 00000010, 00000011, etc.

INT. MUSIC VENUE - GREEN ROOM - NIGHT

The band, who are a cross between Devo and Kraftwerk, are changing into their PERFORMANCE OUTFITS - orange jump suits and green plastic pyramid hats that are held on by chinstraps. One of the band members is messing around with a small handheld CASIO KEYBOARD.

AUDIO TRANSITION

INT./EXT. MUSIC VENUE ENTRANCE - NIGHT

FANS are showing up. They are wearing ridiculous 80s OUTFITS and feathered haircuts. There are a couple lanky SCANDINAVIAN NERDS in the bunch.

The fans are a cross between nerds and punks. The sound of the band's music fades up...

CUT TO:

INT. MUSIC VENUE - STAGE AREA - NIGHT

The BAND is playing PRIMITIVE SYNTH MUSIC and donning their Devo-inspired outfits. They do the "robot step" to the music by stepping up and down from PLATFORMS that sit in front of them on the stage. The dance is similar to a step-aerobics workout. Behind them is a PROJECTION of the 80s-computergreen cellular automaton computer programs. The CROWD shake their heads and sway back and forth with the MUSIC.

Khatchig is in the MIXING BOOTH. He is controlling the COMPUTER that sits above the MIXING BOARD which has WIRES running all over the place. Khatchig surveys the CROWD. There are a set of GROUPIE GIRLS who can be overheard saying something obnoxious. One of the groupies rests her BEER up on the ledge of the mixing booth.

The rule 00011101 projection ends and the next 80s-computer-green pyramid starts - rule 120 (01111000). Khatchig looks down at the computer in front of him which is synced up to the projection. An expression of confusion slowly appears on his face as he watches the program unfold. He looks back up at the projection and then down at the monitor in front of him a few times to make sure they are showing a consistent pattern.

A MYSTERIOUS SCORE begins and the band's music recedes into the background.

CUT TO:

SLOW MOTION shots of the band doing the "robot step" in front of the rule 120 cellular automaton.

CUT TO:

SLOW MOTION shot of the crowd nodding their heads.

CUT TO:

SLOW MOTION CLOSE-UP of a confused Khatchig.

CUT TO:

SLOW MOTION CLOSE-UP of one of the band members singing with his green plastic pyramid hat.

After rule 120 finishes running, the next cellular automaton, Rule 121 starts a new pyramid.

This runs a few lines but produces a plain pattern pyramid which brings us out of slow motion. The mysterious music stops and the band's music fades back up. Khatchig frantically stops the program by pressing ESC and starts typing away on the computer. The computer monitor displays code for Rule 121 "01111001" with the cursor blinking on the last 1. Khatchig switches it back to rule 120 - "01111000". Then Khatchig adds two 0s to the "Time/Row Limit: 50" line of code, turning it to "Time/Row Limit: 5000" and then hits enter.

The mysterious score picks up again and the world transitions back into SLOW MOTION. DOLLY IN on Khatchig who is looking at the projection with a perplexed look on his face. Shots cut between the band, the crowd, and Khatchig. The shots get progressively more close-up until the lens is right in front of the bands chanting mouths, although the mysterious ambient score is what is heard, not the band's music.

The computer begins to have technical difficulty. SPARKS AND SMOKE start to come out. The projection starts to flicker and fade. We hear GROANS from the audience. The mysterious music score ends as Khatchig is taken out of his slow motion trance.

Khatchig looks down and sees the computer cord on FIRE. He screams like a girl, panics, and looks around for a way to put out the fire. He grabs the groupie's beer which is resting on the ledge, and throws it on the fire. This just causes more short circuits, sending more sparks and smoke up into the air.

He then looks around and grabs a FIRE EXTINGUISHER off the wall and puts the fire out. We cut to shocked faces and "oh my god" reactions from the crowd.

CUT TO:

INT. MUSIC VENUE - HALLWAY OUTSIDE GREEN ROOM - NIGHT

The BAND walks by with GROUPIES following close behind. One of the band members makes an annoyed remark about the constant computer mishaps that have been happening on tour, just loud enough for it to be overheard. Khatchig grabs the band leader who is in the back of the pack before he goes inside the green room. One of the groupies stays behind and waits by his side while the rest of the band and groupies go into the green room.

KHATCHIG

I think we need to invest in a printer.

BAND MEMBER

Jesus! What do we need that for?

KHATCHIG

I thought we could print off some of the programs and sell them at the merch table... or maybe use them as an insert for the next album?

The band member rolls his eyes.

KHATCHIG (CONT'D)

Plus, we're also going to need a faster computer. I have one in mind that's going to give us enough juice to run all the visualization programs we need... speaking of which, I don't know if you saw what happened out there but-

BAND MEMBER

Listen dude, I don't even want to know... The band needs to conserve money, man... We can't keep on paying for these computer expenses.

A groupie tugs on the BAND MEMBER's arm.

KHATCHIG

But this is important! There's something very weird going on... it's very counter-intuitive...

The Band member pulls Khatchig aside to level with him. He whispers so the GROUPIE doesn't hear him.

BAND MEMBER

(whispering)

Listen dude, we can't just fund your computer hobby.

(pause)

We need to do what makes sense for the band, and the music is our main focus...

KHATCHIG

(whispering)

So what are you saying?

BAND MEMBER

(whispering)

Listen dude, we'll try to scrape together a little money to buy you some replacement parts just to keep the show going... but we can't afford a whole new computer... or a printer... we hardly have enough money to get from gig to gig...

The groupie tugs on the band member's arm again. This time she pulls him away towards the green room where the after party is going on. The band member gives a look back to Khatchig that says "sorry, there's nothing I can do." We then PAN AND DOLLY to a CLOSE-UP shot of Khatchig as he just stands there in aggravated contemplation.

EXT. MUSIC VENUE - NIGHT

The last of the FANS are walking away from the venue. The camera lingers on them as walk down the street and it eventually becomes quiet.

INT. GREEN ROOM - DAWN

The room is silent except for a faint snore. A JIB CRANE floats in over CIGARETTES, BEER BOTTLES, and other remnants of the party from the night before, and eventually comes upon a passed-out Khatchig with his legs hanging completely off the end of a SMALL COUCH. Shafts of lights coming from the room's lone window fall through early morning dust (FOG MACHINE) onto Khatchig's face. Khatchig slowly awakens. He looks around to find he is the only one in the room. He sees a NOTE sitting on top of a beer on the COFFEE TABLE in front of him. He picks it up and reads it.

INT. STAGE AREA - DAWN

Khatchig slowly shuffles through the empty stage area. He is brightly lit by the blinding sunlight (HMI LIGHT) that is shining directly through the windowless venue doors which are propped open.

INT./EXT. PHONE BOOTH ON DECAYING CITY STREET - DAWN

The streets are empty. Khatchig is looking through the YELLOW PAGES book that is tethered to the booth. He picks up the phone and dials.

KHATCHIG

Hello? Yes, I'm calling for a bed tonight...

(MORE)

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KHATCHIG (CONT'D)
    (pause)
Your ad says you have a
computer?...
    (pause)
Well, I think I'm on the east side
of the city right now, so I won't
be there until later. What's the
easiest way to get there?...
    (pause)
0k...
    (pause)
0k...
    (pause)
Ok...
    (pause)
Ok
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He rips the page out of the phone book, folds it up, and puts it in his shirt pocket. He hangs up the phone and exits the booth. The camera lingers on the dirty pay phone booth as the opening credits music fades up.

OPENING CREDITS AND MUSIC MONTAGE:

EXT. PHONE BOOTH VECINITY - DAWN/DAY

Khatchig flags down a PICK-UP TRUCK. It pulls over to the side and Khatchig runs up to the driver side window and says something. There are THREE PEOPLE sitting across the cab of the truck so he then throws his SUITCASE in the back of the pick-up and then hoists himself up and in. The pick-up takes off down the road.

EXT. OUTSKIRTS OF DECAYING CITY - DAY

The PICK-UP travels through the outskirts of the city.

EXT. STREET NEAR A BODY OF WATER - DAY

The PICK-UP pulls over to the side and Khatchig jumps out with his SUITCASE. He tips his imaginary hat to say thank you as he walks down towards the river.

EXT. MAIN-LAND DOCK - DAY

Khatchig is standing on a FLOATING DOCK, waiting for the WATER TAXI that is pulling up.

INT. WATER TAXI - DAY

Khatchig stares out of the window at the city across the river.

EXT. CITY DOCK - DAY

Khatchig is getting off the WATER TAXI.

EXT. CENTER CITY - LATE AFTERNOON

Khatchig is walking down the city streets with his SUITCASE. He passes old European-style architecture. He passes a BOY sitting on a STOOP looking at a FLIP-BOOK. After Khatchig passes by, there is a DOLLY IN over-the-shoulder on the boy looking at the flip-book movie of a stick figure walking over a cliff ledge.

EXT. OUTSKIRTS OF DECAYING CITY OUTSIDE HOSTEL - DUSK

As Khatchig approaches the hostel, he passes a HOMELESS MAN standing flush against a building wall. The DOLLY STOPS as Khatchig continues out of the frame. DOLLY-IN on the HOMELESS MAN who turns around, zips up, and reveals a pee stain on the wall. He gives a glare off camera in Khatchig's direction as a short MYSTERIOUS MUSICAL INTERLUDE plays.

CUT TO:

Khatchig looks up at the HOSTEL SIGN above the door. He then enters the hostel.

CUT TO:

The HOMELESS MAN walks away yelling nonsense at somebody who isn't there.

INT. HOSTEL CHECK-IN COUNTER - DUSK

Khatchig is standing in line behind TWO TRAVELERS with HUGE TRAVELING BACKPACKS that stand at the check-in counter. JACQUELINE, a beautiful young French woman is behind the counter. We hear her say a line or two in French (with no subtitles) before switching to English.

JACQUELINE (French accent and broken English) (MORE) JACQUELINE (CONT'D)

Your room is the second door on the right upstairs... Breakfast is in the upstairs lounge. It ends at 9.

The travelers nod OK and take a set of KEYS that JACQUELINE hands to them, and walk up the stairs.

JACQUELINE (CONT'D)

(to Khatchig)

Can I help you?

KHATCHIG

I called earlier today about a bed.

JACQUELINE

(French accent and broken English)

Ok, and how many nights will you be staying?

KHATCHIG

Indefinitely.

JACQUELINE

(French accent)

Indefinitely?

KHATCHIG

...Or at least a little while.

JACQUELINE

(French accent and broken

English)

Well, how many nights would you like to pay for now?

KHATCHIG

Well, that's the thing...

Khatchig flashes a "help me out" look. JACQUELINE rolls her eyes and lets out a heavy sigh.

CUT TO:

INT. HOSTEL HALLWAY - DUSK

We are looking down a tall narrow white hallway with FRAMED BLACK AND WHITE PHOTOGRAPHS on the walls and PLANTS adorning the floor. Two travelers with LARGE BACKPACKS on pass by the T junction at the far end of the hallway, walking down the perpendicular hallway. JACQUELINE's voice is heard, and then a moment later she and Khatchig turn the corner and start to walk towards the camera.

JACOUELINE

(French accent and broken English)

I can't give you the full-priced beds, so you will have one of the beds in our upstairs lounge.

KHATCHIG

That's fine.

JACQUELINE

(French accent and broken English)

The upstairs lounge is open to all guests from 7:00 in the morning until midnight. It's not as private, but...

KHATCHIG

And where's the computer?

JACQUELINE

(French accent and broken English)

In the lounge. There is a sign-up list at the bar.

INT. HOSTEL LOUNGE - DUSK

An OLD TV showing the news sits on the corner of the lounge bar. The news is showing police and protesters rioting in the streets. BRENDA, the Irish bartender, stands behind the counter holding a broom watching the television, while RUUD, a Dutch guy, and SLOVAK GUY sit at the bar, sipping beer.

RUUD

(rhetorically)
Wanneer zal doorgeven?
 (subtitles)
When will it all pass?

CUT TO:

JACQUELINE leads Khatchig into the lounge area. She points towards the two bunk-beds at the far end of the room.

JACQUELINE

(French Accent)

You're the bed left top.

Khatchig looks at the bed and then turns and looks at the other side of the room. He's eyes widen. DOLLY IN as Khatchig says:

KHATCHIG

(whispers)

There she is.

Khatchig's POV

ZOOM IN past MARCELL, a short foreign traveler, to the OLD COMPUTER he is sitting in front of.

BACK TO SCENE

JACQUELINE

hmmm?

Khatchig starts to leave JACQUELINE's side and walk towards the computer.

JACQUELINE (CONT'D)

Ah, l'ordinateur. The computer is available...

JACQUELINE checks her WATCH.

JACQUELINE (CONT'D)

...for only a little while longer.

DOLLY over Khatchig's shoulder as he walks towards the computer. He stops and stands over MARCELL's shoulder who is sitting at the computer. He is playing Appalachian Trail, a computer game that is a knockoff of the classic game Oregon Trail.

JACQUELINE (O.S.) (CONT'D)

(across the room)

Please let me know when the check arrives.

Khatchig just glances back and gives a casual nod as if to say "of course" before turning his attention back towards the computer.

KHATCHIG

(to MARCELL)

What'd you got going on here?

We see JACQUELINE roll her eyes. She turns around and walks out of the lounge.

INT. HOSTEL HALLWAY - DUSK

JACQUELINE is walking back to the check-in counter when we she runs into a coworker, SERGEY. He is walking with FRANCOIS, a french traveler.

JACQUELINE

(to Francois)

Bonjour.

JACQUELINE (CONT'D)

(to SERGEY broken English)

Just to know, I let the guy on the left top bunk in the lounge stay on credit until he gets paid in a couple days.

SERGEY

(Russian accent and broken English)

OK, but you know what happened the last time you were so generous.

JACQUELINE

(French accent and broken English)

There is something different about him...

SERGEY

I am showing Francois here to a new room.

FRANCOIS

(to JACQUELINE)

L'homme dans ma chambre ne sera pas arrêter de fumer. Tout sent.

(subtitles)

The guy in my room won't stop smoking. Everything smells.

JACQUELINE

Je suis sûr que votre nouvelle chambre sera mieux.

(subtitles)

I'm sure your new room will be better.

JACQUELINE smiles at SERGEY and they both go on their way.

INT. HOSTEL LOUNGE - DUSK

Yiwen, a chinese girl, is behind the counter serving drinks to a couple travelers that sit at the bar. There is old television on the back corner of the bar that shows rioting in the street and shots of a war going on.

On the other side of the room, Khatchig is sitting at the computer. The cellular automaton rule 120 is on the screen.

KHATCHIG

Something very weird is going on here. I thought it might have been a bug or something, but I guess not...

MARCELL is standing over Khatchig's shoulder. The two have switched positions from just moments earlier.

MARCELL

(foreign accent)
What? Why did this stop my game?

KHATCHIG

Do you see a pattern, because I don't? I see something very complex... it's almost random but...

MARCELL

(foreign accent)

I want to use the computer.

KHATCHIG

OK, just watch this. I want to show you why this is crazy.

On the computer screen, above the cellular automaton pattern is the 8-bit code that defines the rules for the pattern that is generated. Khatchig changes one of the 0s in the 8 bits of cellular automaton code to a 1. Khatchig hits Enter on the keyboard. A checkerboard pyramid cellular automaton runs.

KHATCHIG (CONT'D)

Simple pattern, right? How about this.

Khatchig changes one of the 1s in the 8 bits of cellular automaton code to a 0. Khatchig hits Enter on the keyboard. A simple pattern comes up.

KHATCHIG (CONT'D)

Simple again. Well, makes sense. We have a simple program.

Khatchig points to the simple 8-bit program at the top of the screen.

KHATCHIG (CONT'D)

How about another?

Khatchig changes one of the 1s in the 8 bits of cellular automaton code to a 0. Khatchig hits Enter on the keyboard.

KHATCHIG (CONT'D)

Ok, well this one is a little more intricate, but it is still just a nested pattern with regularity.

(pause)

OK, one more.

Khatchig changes one of the 1s in the 8 bits of cellular automaton code to a 0. Khatchig hits Enter on the keyboard. This time the pattern is very basic, a single vertical line.

KHATCHIG (CONT'D)

This result is even more trivial, but what do you expect from such a simple program.

(pause)

But now watch this.

Khatchig changes one of the 1s in the 8 bits of cellular automaton code to a 0. Khatchig hits Enter on the keyboard. rule 120 appears.

KHATCHIG (CONT'D)

...Some patterns on the side here, but a lot of complexity.
Complexity... but some pockets of predictability... like the lines will... but richness!... A lot of it!... And it's all coming from these very simple rules... but it looks almost random... I'm not sure what's going on here...It's very counter-intuitive... very weird... Don't you see?

MARCELL gives a look as if to say "No, how would you expect me to know what on earth you are talking about?" Unperturbed by MARCELL's reaction and perhaps oblivious to how crazy he sounds, Khatchig prods MARCELL for a response as if MARCELL is on the brink of the same revelation.

KHATCHIG (CONT'D)

Don't you see?

JACQUELINE walks up and interrupts the conversation before MARCELL can tell Khatchig he's crazy.

JACQUELINE

(French accent and broken English)

I'm sorry, but we must stop the computer. The upstairs lounge will needs to leave early for Yiwen.

Yiwen, a Chinese girl, is behind the bar. She is taking some of the liquor bottles that sit in front of the mirror and putting them down below the counter. There are a few travelers sitting at the bar who are getting up and paying their tab.

KHATCHIG

Can we have just a few more minutes? We were right in the midddle of something big...

(to MARCELL)
wouldn't you say?

JACQUELINE looks to MARCELL for his reaction. MARCELL nods unsure.

JACQUELINE

(French accent and broken English)

The downstairs pub and lounge are still open, but the computer needs to shut down when this lounge closes.

Khatchig sighs but acquiesces. He gives a head nod of reassurance in MARCELL's direction.

KHATCHIG

(to MARCELL)

Ok, come on, let's go.

Khatchig picks up his suitcase and walks over to the bed area. MARCELL follows behind him. Khatchig throws his suitcase on the top-left bunk and then turns back around. He looks back at the computer and then to MARCELL who has followed him over to the bunk. He begins to ask MARCELL something but his attention is focused on the computer.

KHATCHIG (CONT'D)

So what room are you in?

MARCELL begins to answer but Khatchig is looking over at the computer.

CUT TO:

JACQUELINE is looking at the back of the computer.

MARCELL (O.S.)
(foreign accent and broken
English)
Umm... How do you.. It's end of
walk... it just-

JACQUELINE turns her head and catches Khatchig staring in her direction nervously, not paying attention to MARCELL who is searching for the proper English to answer his question. She then turns her head back to the computer, unplugs the computer's power cord from the outlet and removes the other end of the cord from the back of the computer. She wraps the cord up and then takes it with her as she leaves to exit the room.

Khatchig cuts off MARCELL mid-sentence:

KHATCHIG
(across the room in
JACQUELINE's direction)
Oh, come on!

MARCELL has a confused look on his face. He just begins to notice Khatchig is not focus on what he was saying. MARCELL slowly turns his head to see what Khatchig is looking at. After a moment, he looks back at Khatchig with the same perplexed look on his face.

CUT TO:

INT. HOSTEL LOUNGE - MIDDLE OF THE NIGHT

Khatchig is lying on the top bunk bed. The room is dark and he is lit by moonlight. He sits up in bed. He looks over at the computer. He looks over at the bunk bed next to him. There is a guy on the top bunk, and a girl curled up under a quilt on the bottom bunk. He then starts to lean over the bunk bed bars to see who is on the bunk bed below him. The bed squeaks.

CUT TO:

LANA, a beautiful Spanish girl is on the bottom bunk below Khatchig. Her sleepy eyes looks up at the top bunk which is squeaking from Khatchig's movement.

LANA's POV

Khatchig's slowly lowers his head down. Eventually his eyes peak out from behind the edge of the top bunk. He is surprised to see LANA staring back at him, and quickly pulls his head back up.

BACK TO SCENE

LANA smiles and shakes her head.

Khatchig is lying in on the top bunk with an "oh shit" look on his face. All of a sudden we hear the SLOVAK GUY on the bunk next to Khatchig.

SLOVAK GUY

Na zdravie kurca.

Khatchig's expression changes to one of confusion. He leans up and looks over at the bunk next to him to find the SLOVAK GUY dead asleep. He then rests his head back down on the pillow. The camera stays on Khatchig's confused look for a beat.

EXT. SKY - NIGHT

Clouds pass in front of a crescent moon.

INT. HOSTEL LOUNGE - MIDDLE OF THE NIGHT

Khatchig is climbing down the ladder of the bunk bed.

KHATCHIG

(whispers to LANA)

Sorry.

The SLOVAK GUY mumbles something again in his sleep. Khatchig tiptoes over to the computer. LANA lifts her head up in bed and peers over. Khatchig turns the computer around.

Khatchig's POV

We see the back side of the computer with the three-pronged electrical connection for the cord that JACQUELINE removed.

INT. CHECK-IN COUNTER - MIDDLE OF THE NIGHT

Khatchig, lit by moonlight, walks down the quiet hostel hallway towards the check-in counter. He peeks behind the check-in counter searching for something.

He puts his hands on the counter and hoists himself up a foot or so off the ground, stretching his neck to try to see all the angles of the recessed desk below the counter. His wobbly arms lower himself down from the counter. He takes a few quick little steps backwards to build up a little speed, and then runs and ungracefully hurls his body over the counter, wiping out and making a loud commotion in the process. He gets up from the ground, dusts himself off. He peaks around the corner to see if the commotion has awaken anybody but the hallway is dark and quiet. He searches the desk but can't find what he is looking for.

EXT. HOSTEL - MIDDLE OF THE NIGHT

Khatchig walks out of the Hostel door.

EXT. STREET - MIDDLE OF THE NIGHT

Khatchig walks down an empty quiet street towards a bodega. There is an old man uner a street light on the opposite side of the street looking down on the ground for something.

INT. BODEGA - MIDDLE OF THE NIGHT

Khatchig stands in the candy aisle. He reaches down and picks something out. He walks to the end of the aisle, turns the corner, and goes down another aisle. This aisle has cords and other computer parts you'd see at a radio shack kind of store.

Khatchig's POV

Khatchig's hand reach out for a beige cord that hangs on a rack. It looks similar to the one JACQUELINE had removed from the back of the computer. He turns the cord package around to reveal an orange sticker on it that reads "8.99".

BACK TO SCENE

Khatchig exchanges glances with the OWNER, an Indian man, who stands by the register at the check-out counter.

CUT TO:

A box of candy is on the on check-out counter. TILT-UP to reveal the owner picking up the box of candy to look at the price tag, and then typing it in on the REGISTER. Khatchig opens his wallet, takes out the only bill, and hands it over to the Owner. The owner takes the bill, puts it in the register, and then puts four coins of different sizes and colors on the counter. They exchange suspicious looks.

Khatchig takes his candy and change and then walks out the bodega door.

EXT. STREET - MIDDLE OF THE NIGHT

Khatchig walks down the street eating his candy. He lifts up his shirt and pulls the cord out from his underpants.

Khatchig takes the cord out of its packaging and walks over to a trash can on the corner to throw it out. On the other side of the street is the old man. He is crouched over underneath the only light on an otherwise dark street corner looking for something on the ground. Khatchig watches him for a moment.

OLD MAN

(foreign language with
 subtitles)

Oh my... where are they?

Khatchig can tell he is distressed.

KHATCHIG

What are you looking for? Can I help you find it?

OLD MAN

(Accent)

My keys. I've lost them.

Khatchig crosses the street while the man continues to look on the ground beneath the streetlight.

KHATCHIG

Are you sure you lost them here under the light?

OLD MAN

(Accent)

No, I think I may have dropped them over there in the alley...

Khatchig has a confused look on his face as he looks over at the dark alley.

OLD MAN (CONT'D)

But there's no light over there.

(pause)

This is the only place I have a chance of finding them.

Khatchig stands in contemplation for a moment.

INT. HOSTEL LOUNGE - MIDDLE OF NIGHT

Khatchig quietly walks back into the lounge. He walks over to the computer and sits down. He turns the computer around and plugs the cord into the computer and the outlet. He flips the switch on the back of the computer and the monitor turns on. "Pluralis" my Manuel Gottsching begins to play.

Montage:

We transition into a montage of Khatchig running all 256 cellular automaton programs. Cellular Automaton rules in 80s-computer-green are composited over the shots. He stops at rule 120 and shakes his head in confusion. He then continues to run the other programs. After some time he comes across rule 244, another simple program that exhibits complexity. He is confused again. He follows what looks like a particle as it evolves through the steps of rule 244 on the computer screen. The last shot in the montage is a short time-lapse of early morning dawn light moving over Khatchig who is dozing off in front of the computer which continues to run the rule 244 program. The result looks like a complex particle trickling down the computer screen.

EXT. HOSTEL ROOF - DAWN

The sun is rising over a decaying urban landscape. Off on the horizon sits the tall buildings of city's downtown.

INT. HOSTEL LOUNGE - MORNING

Travelers are gathered around the continental breakfast that is out on the dining room table. A few other travelers are sitting at the bar enjoying tea and coffee. Khatchig is lying in the top bunk asleep. JACQUELINE is crouched over behind the computer putting the computer cord back in and turning the computer on. Another traveler sits on the couch in the corner reading a newspaper.

Khatchig wakes up to the early morning commotion in the lounge. He leans up in bed and looks over to see people enjoying the continental breakfast. He checks his CALCULATOR WATCH to see what time it is.

Khatchig'S POV

It reads 8:30. The number 1.4142135 is above the time on the watch.

BACK TO SCENE

Khatchig groggily walks over to the continental breakfast that sits on the dining room table. He picks up a few croissants and stuffs them in his pocket. He picks up a couple of sausage links and wraps them in a napkin and puts it in his other pocket. He takes another croissant and a couple of "ants on a log" (celery, peanut butter, and raisins) and walks over to the bar.

LANA sits a few stools down at the bar. RUUD, a long-time resident of the hostel, stands at the far end of the bar in the background. He is putting his name on a paper that sits on the bar. He then says something to SERGEY who is behind the bar, and then walks away.

LANA

(Spanish accent and broken English)
What you do last night?

Khatchig looks up from his food surprised to find LANA talking to him.

KHATCHIG

Oh, that. Sorry to wake you. (pause)
I just had to run a few programs...
that's all...

TIANA

(Spanish accent) Programs? Computer?

KHATCHIG

Well, yes... I did a systematic search last night of all these 3-bit, one-dimensional, cell progression programs... there's only 256 of them so it's manageable.

(pause)

I thought there was this unique anomaly in one of the programs, but then I came across another... something even more interesting...

LANA has a confused look on her face.

KHATCHIG (CONT'D)

It turns out there is another program...Hold on, it would be easier to explain if you could see what I am talking about.

Khatchig runs over and sits down at the computer just before RUUD, who is carrying a NOTEBOOK AND PENCIL reaches the computer.

RUUD

(Dutch accent)

Hey! There is a sign-up list at the bar.

KHATCHIG

I'll just be a second.

Khatchig types in some code on the computer as RUUD says:

RUUD

(Dutch accent)

I saw you bossing guy around on the computer last night... JACQUELINE is not going to let you stay here long with that attitude...

KHATCHIG

You work here?

RUUD

(Dutch accent)

No, but I've been here 3 years now, so I know how it is run around here.

Khatchig pays no attention to RUUD's comment, and continues typing the code, eventually hitting enter. We hear the sound of a DOT MATRIX PRINTER starting to print.

KHATCHIG

Just give it a second to print and it is all yours.

RUUD

(In Dutch with subtitles) Your days are numbered.

KHATCHIG

Been here three years, huh? (pause)

It must be nice to afford to be on permanent vacation.

RUUD

(Dutch accent)

I work... but I do not have to be tethered to a desk or machine. I manage a rental property.

KHATCHIG

(sarcasm)

A real estate mogul at your age? Quite impressive.

Khatchig gets up to let RUUD sit down at the computer. RUUD has an annoyed demeanor.

On a little table next to the computer a Dot Matrix printer slowly prints out rule 244 on continuous printer paper with perforated edges. The printout is forming a stack of papers that fold together in a neat pile like an accordion.

Khatchig waits by the printer. He looks around. On the other side of the room, a tall SOUTH AFRICAN GIRL puts the needle down on a vinyl record on the turntable. She starts to dance with MIKEAL, the filmmaker. Khatchig watches for a moment as they share laughs and a innocent flirtatious moment. Khatchig looks on longingly.

The sound of the printer stopping takes Khatchig out of the moment. Khatchig tears the last page in the printout off and picks up the neat stack of papers with a portion of cellular automaton rule 244 on it. He gives RUUD a nod to let him know he is good to go on the computer, and then walks over to the bar.

KHATCHIG (CONT'D)

OK, so this is a portion of the output from the program I ran last night. Rule 244, or 11110100 in binary.

Khatchig points to the blank(0) and filled(1) cell program rules on the top of the printout.

There is a pause as LANA has a confused look on her face.

KHATCHIG (CONT'D)

So I printed off the first page, which has the first 30 steps of the program, and then a portion of the output around 10,000 steps in.

Luckily I saved the results when I woke up, because it would have taken me forever to run it this many steps again... I must have dozed off for a while.

Khatchig shows her the printouts with the cellular design.

KHATCHIG (CONT'D)

Up top are the rules. For the initial conditions, I set all the cells to off except the one in the middle there. It's a visual representation, but you could think of each line of black or white cells as just a string of 1s and Os, and you could think of the rules as just replacing string of bits, you could also think of it just being a single line that evolves over time which is on the vertical axis... it's all the same information, just in different forms... there's lots of other ways to look at it... but probably the best way is in the simplest and most general sense... but it's hard to know when you are on the ground floor, so to speak. Anyway...

LANA

Ummmmmm

KHATCHIG

Ok, simple initial conditions. Simple rules. Simple result?...
No... Look at this complexity. It almost looks like some particles moving around. It's very complex and I am not sure what's going to happen. Will the system settle down? Will it get more complex. Will these computations annihilate each other?

LANA

I don't know.

KHATCHIG

Exactly, neither do I. But wouldn't you expect that with such a simple program we would get boring, predictable results?

LANA

I don't know.

KHATCHIG

KHATCHIG (CONT'D)

I thought it was a mistake, but it isn't. I checked it. Then after I realized it was a real computational phenomenon, I thought it must be a one-off fluke. But I decided to run all 256 of possible rules of this type of program last night and I ran it to this one... something even more interesting with even greater richness... which has me thinking that I need to run lots of other simple programs. Maybe it's not just these 3-bit cell progression programs.

LANA

(sincerely)

I am not sure I understand, but it sounds interesting.

RUUD has come back to the bar. He butts into the conversation.

RUUD

(Dutch accent)

Don't encourage him. He'll just keep on hogging the computer.

Khatchig glares.

RUUD (CONT'D)

(to bartender)

Hey hon, can I get a coffee.

BRENDA

(Irish accent)

You know you have to drink it hear at the bar if I make it an Irish for ye?

RUUD

(laughing)

No, straight up coffee. It's too early for me.

BRENDA

(flirting)

Just letting know the rules, but I know you know 'em.

KHATCHIG

(to RUUD)

You don't even know what I am talking about.

RUUD turns, caught off quard by Khatchig's delayed response.

RUUD

(laughing)

What?

KHATCHIG

You're very quick to pass judgement.

RUUD

(laughing)

Oh, you're delayed response caught me off guard. I wasn't saying anything about whatever crackpot theories you're pushing... I was just making a comment about sharing the computer with the rest of the travelers.

RUUD gives a look to BRENDA as if to say "this guy is crazy." He then takes his coffee and walks back to the computer. Khatchig hangs his head low and he has an overall humiliated and insecure demeanor.

KHATCHIG

(quietly to himself) That guys a jerk.

LANA

(Spanish accent)

Don't listen to him. He's an asshole?

KHATCHIG

You think?

LANA

(Spanish accent)

He tried to feel up my friend the other night at the discoteque. He was all over her bragging about this and that. Real pompous asshole.

KHATCHTG

That makes me feel better.

LANA

What?!

KHATCHIG

I just meant that I'm glad you agree with what I was saying and not him.

LANA

I never said I agreed with you. I have no idea what you are talking about.

(pause)

But maybe you can explain it to me again later.

KHATCHIG

Are you staying here long?

LANA

I am not leaving for Tosa Del Mar until the weekend.

KHATCHIG

Good. Well, I should get back to the computer.

LANA

(pointing to the printout)
You want to make more pictures?

KHATCHTG

In a sense... I have to check other types of simple programs. You see, that was just one particular one-dimensional 3-bit cell progression algorithm. Cell progressions like that are just one type of program. I need to run a lot more.. 2- and 3-state turing machines, 2-dimensional cell progressions, maybe with different tiling patterns, rewrite systems...

EXT. GAS STATION - DAY

One of the band members is filling up the Utility Van with gas. The other two are walking towards the convenience store.

BAND MEMBER

Load-in is at 7:00 so we should be ok on time.

BAND MEMBER 2

We're not loading in the computer or the projector anymore, are we?

BAND MEMBER

No, just the amps and equipment... I don't even know how to set that stuff even if it did worked.

BAND MEMBER 2

I wonder how that crazy bastard's doing.

Band Member just nods in agreement and looks off contemplatively.

BAND MEMBER 2 (CONT'D)

Are we still doing the dance even though we won't being doing the projections?

BAND MEMBER

(nodding)
Still doing the dance.

BAND MEMBER 2

... And wearing the outfits?

BAND MEMBER

(nodding)
And the outfits.

INT. HOSTEL LOUNGE - DAY

DOLLY IN on Khatchig staring at the computer blankly, which is running programs (generating patterns). The program eventually stops along with the sound, which causes Khatchig to twitch his head a little. He takes a deep breath as he sits up, almost coming out of a trance. He changes the code at the top of the computer and hits enter, sits back, and watches the programs run... patterns are generated.

MARCELL approaches.

MARCELL

(accent)

Hey... Mister programs.

KHATCHIG

(shaking his head)

There's too many simple programs out there for this one computer to run. This is going to take forever.

MARCELL

(accent)

Looks fun.

KHATCHIG

Sure when there are only 2^(2^3), or 256, 3-bit, one-dimensional cell progression programs like those ones I was showing you before... but for other types of simple programs, there might be billions of programs in the space of all possible programs for just a single class... not to mention designing algorithms to automatically check the outputs for complexity... It's just going to take forever on this computer.

MARCELL can tell Khatchig is slightly frustrated.

MARCELL

(accent)

Well, good luck.

Khatchig turns back around to face the computer which continues to run programs. He stares at it for a moment and then looks away contemplatively.

A young SOUTH AFRICAN GIRL comes up behind Khatchig who is zoning out.

SOUTH AFRICAN GIRL

(accent)

You use this computer long?

Khatchig brings himself back to earth, out of deep thought. He realizes that he must look awkward.

SOUTH AFRICAN GIRL (CONT'D)

(accent)

I want to check my grades.

KHATCHIG

Oh, ok.

Khatchig hits ESC on the computer to stop the programs from running.

KHATCHIG (CONT'D)

I'll just pick these back up later.

Khatchig stands up and the girl sits down. Khatchig has a confused look on his face.

KHATCHIG (CONT'D)

The schools sends you one of those electronic messages with your grades?

SOUTH AFRICAN GIRL

No. I use a password to log in to University's network.

KHATCHIG

Oh?

SOUTH AFRICAN GIRL

Since this hostel is associated with the University's exchange program, this computer is connected to their network.

KHATCHIG

This computer is a part of City Tech's network?

SOUTH AFRICAN GIRL

Yeah, it's one of only a couple of computers that is off campus.

KHATCHIG

Really?

SOUTH AFRICAN GIRL

The computer science department started the network just a few years ago, and at that time it just connected a few computers in one lab. But the number of connected computers in the network has more than doubled every year since... And they have plans to keep expanding.

KHATCHIG

Things have changed since I was there and we just had the one mainframe.

The SOUTH AFRICAN GIRL just smiles politely.

KHATCHIG (CONT'D)

Well don't let me hold you up...

Khatchig walks over to the dot matrix printer. He grabs a few print outs off the printer. He pretends to look at them but he looks over at the SOUTH AFRICAN GIRL who sits in front of the computer out of the corner of his eyes.

Khatchig'S POV

Zoom In on the SOUTH AFRICAN GIRL's hands typing on the keyboard.

BACK TO SCENE

The computer monitor shows a password being typed. Khatchig is still looking over discretely.

Khatchig'S POV

The SOUTH AFRICAN GIRL's hands type the last couple letters and then hit enter.

BACK TO SCENE

The SOUTH AFRICAN GIRL starts to turn her head to look over in Khatchig's direction. Khatchig quickly looks away and back at the printouts he holds in his hand.

CUT TO:

KHATCHIG (CONT'D)

I've got the password!

MARCELL

What?

KHATCHIG

The password to get on the university's network. It's time for some parallel computing.

Khatchig mimes "parallel" by running his hands down parallel away from himself.

MARCELL

(accent)

What is it?

KHATCHIG

(pause)

Bunnies.

(pause)

B. U. N. N. Y. S.

Khatchig cups his one hand around an imaginary bunny and strokes it with another miming a bunny.

MARCELL

(accent)

Rabbit?

KHATCHIG

Bunnies.

MARCELL

(acccent)

That's not how you spell bunnies.

KHATCHIG

What?

MARCELL

(accent)

B, U, N, N, I, E, S.

MARCELL's knowledge of English spelling shocks Khatchig.

KHATCHIG

So? It doesn't matter; What matters is this password is now going to give me the capabilities to run all my programs.

MARCELL

(accent)

Why would password be bunnies?

KHATCHIG

I don't know. It might be the university's mascot. I can't remember. It's been a while.

MARCELL

(accent)

Did you go to the City Tech?!

KHATCHIG

Yeah, it was a while ago.

MARCELL

(accent)

That's a good school. What'dja study?

KHATCHIG

Computers, symbolic systems, mathematics... a little physics.

FLASHBACK TO:

Spectroscopy Experiment: Young Khatchig who is clean shaven, with no grey hair, and a neatly styled haircut is shown in a lab performing an experiment with sunglasses on instead of the goggles his lab partner wears.

"Hello World" Program: Young Khatchig is writing computer code on a very ancient looking computer. There are computer tape relays spinning in the background behind him. He hits enter on the keyboard. "Hello World" is shown on the monitor.

Gabriel's Horn Paradox: Young Khatchig is in utter dismay arguing with a professor in font of a chalkboard full of calculus equations and a drawing of a 3-dimensional horn.

Particle Collisions: Young Khatchig turns up a knob. An electronic noise increases in frequency until a fuse blows, and small amount of smoke comes out of the control board.

The titles for each shot are overlaid in 80s-computer green digital font.

BACK TO PRESENT

MARCELL

(accent)

You major subject was all those?!

KHATCHIG

No. It doesn't matter.

(pause)

Listen, how did you know that, anyway?

MARCELL

(accent)

What?

KHATCHIG

How to spell bunnies.

MARCELL

(accent)

I study English at school. If the noun ends in Y, change the Y to I,E when make it plural with S. (pause)

It's not always the case but...

Khatchig grab's the sign-up list off the bar. There are several names crossed off. The name Francois is the next name on the list.

EXT. ANOTHER MUSIC VENUE - DAY

The band is loading in their equipment to another venue.

INT. HOSTEL LOUNGE - DAY

Khatchig is sitting at the computer. When Khatchig attempts the password we find out he didn't actually get the correct password. He tries several slight variations of the password in a row. Each one is denied by the computer. "Wrong Password. Please try again." He shortens the password attempts to one character long. He hits return on the keyboard. Each attempt is met with a beep to indicate a failed attempt. After several attempts a grin starts to emerge on his face. We see "Please try again" repeatedly appear on the screen. We see a twinkle of hope in Khatchig's eyes.

KHATCHIG

Amateurs

Khatchig counts to himself "1, 2, 3, 4, 5, 6" as he hits the Z key 10 times. We hear the computer beep 4 times at the end to indicate the the number of characters in the password field is maxed out. The password field on the computer monitor grows to a length of 6 asterisks long, "PASSWORD:******.

Khatchig then presses a few keys and brings up a blank screen. He starts to feverishly write script. The code is written in a natural, nested, non-linear way, from the inside out, with code written above and below the code that has already been written. The code that results in 80s-computergreen on the monitor is the following:

Routine
n = integer = 0
Loop n to MaxChar

```
m = integer = 0
Loop m to MaxChar
l = integer = 0
Loop 1 to MaxChar
k = integer = 0
Loop k to MaxChar
j = integer = 0
Loop j to MaxChar
i = integer = 0
Loop i to MaxChar
Strng = char(n)&char(m)&char(l)&char(k)&char(j)&char(i)
Psswrd Attmpt
i = i + 1
Loop end
j = j + 1
Loop end
k = k + 1
Loop end
1 = 1 + 1
Loop end
m = m + 1
Loop end
n = n + 1
Loop end
End Routine
```

After the code is written, Khatchig takes a deep breath and pauses for a second. He then hits Enter on the keyboard.

The computer program starts going through every possible password starting with the shortest ones. The computer starts making a very fast beeping sound with each password attempt failure. This sound draws the attention of some of the travelers in the lounge. Khatchig just smiles at the travelers calmly, ignoring the sound. RUUD walks over.

RUUD

(Dutch accent)
Did you break the computer?!

KHATCHIG

Just take it easy. Everything's fine.

RUUD puts his hands over his hears and has a painful grimace on his face.

RUUD

Dat geluid irriteert! (subtitles)
That sound annoys!

KHATCHIG

Alright, just...

Khatchig looks around. He sees an afghan blanket thrown over the couch where LANA sits reading a book. He walks over and grabs it. He brings it back and throws it over the computer, wrapping it around it tightly to muffle the sound. This has little affect on the sound which is still audible.

RUUD rolls his eyes and shakes his head.

RUUD

Dat is niet effectief. Je bent een idioot.

(subtitles)

That is ineffective. You are an idiot.

KHATCHIG

Just...

Khatchig looks around again. He walks over to the vinyl records and starts to go through them. He picks one out and puts it on the turntable. He carefully places the needle down. "Time After Georgy" comes on. He turns the volume on the receiver up until the beeping sound from the computer is nearly drowned out.

KHATCHIG (CONT'D)

(to RUUD)

Just give it one song, then it will be done. That's all I ask.

RUUD rolls his eyes, shakes his head, but acquiesces.

Khatchig starts to feel the music that is filling the room. He starts shaking his legs back and forth, swaying to the music. He then begins to snap his fingers. You can see the emotion in his face. As soon as the first verse kicks in he starts singing falsetto over the music. He slowly turns as he dances until he is facing LANA who sits on the couch with a book in her hand. Khatchig then starts to point at LANA as he sings the verse, as if she is the girl the song is about.

KHATCHIG (CONT'D)

(singing)

I, I saw you out the other day, You told me off to my face, And turned away.

Khatchig motions for LANA to join him. LANA smiles, stands up, and takes Khatchig's hand. Khatchig looks a little more nervous now as they begin to dance. As the music plays we see shots of a jealous/resentful look on RUUD's face, the turntable, confused looks from other travelers, the afghan blanket covering the computer, etc.

At one point, MICKAÉL who is watching them dance picks up his 8mm camera. He walks over and starts to circle around them, filming them as they dance. Khatchig flashes a look as if to say "Do you have to film us?"

MICKAÉL What? It's beautiful.

Khatchig smile slightly as if to say "Ok, fine."

MICKAÉL (CONT'D)

Ok, ok.

MICKAÉL throws up his hands, turns and walks back to his stool at the bar. On the way, he playfully points the camera at RUUD's face and pulls the trigger on the 8mm camera. RUUD swipes his hand at the camera. MICKAÉL quickly stops.

SLOVAK GUY starts moving his head like he is listening to a bass beat in a club. He pulls his hoodie over his head and gets up on the "dance floor" right along side Khatchig and LANA. Khatchig and LANA give the SLOVAK GUY a weird look since his style of dancing looks more appropriate for a techno song being played at a club. He dances around with his head down. He then flashes a smooth look that says "hey, you want to dance" to a Korean Girl at the bar. The Korean Girl just has a perplexed look that says "Are you serious?"

JACQUELINE comes in towards the end of the song. She looks at Khatchig, LANA, and the SLOVAK GUY dancing. She then looks at the afghan blanket covering the computer. She then looks over at the turntable which is turned up to an unacceptable level.

RUUD looks up and sees JACQUELINE. He smiles.

JACQUELINE walks over and unwraps the blanket from the computer. The computer is still cycling through passwords.

As the music fades at the end of the song, Khatchig and LANA gaze into each others eyes. All of a sudden we hear a ding from the computer - the password has worked.

The password "VIENNA" is displayed on the monitor.

MICKAÉL all of sudden cuts in between Khatchig and LANA and breaks up the moment they were having.

MICKAÉL (CONT'D)
Sorry to film, but it so beautiful.
(pause)
(MORE)

MICKAÉL (CONT'D)

My other film will show here on Sunday. You be here to see?

KHATCHIG

Ummm...

LANA

(accent)

Possiblu. I travel to see my friend... umm-

JACQUELINE butts in annoyed.

JACQUELINE

(French accent)

Do you know why the blanket was wrapped around the computer?

KHATCHIG

I'm sorry. Some of the travelers were complaining about the noise it was making, so I wrapped the blanket around it to make it quieter.

JACQUELINE

(French accent)

Is it broken?!

KHATCHIG

No I was just running something... It's done now.

JACQUELINE just shakes her head in annoyed confusion.

JACQUELINE

(French accent and broken

English)

Nevermind. So you'll be able to call the band just to confirm that they have the correct address and they are sending the check?

KHATCHIG

(defensive)

They're sending it. They have the address here. I don't have anyway to get in touch with them, so I can't prove it to you.

JACQUELINE

Where is their next show?

KHATCHIG

I forget. It's in some little seaport south of here.

JACOUELINE

What's the name of the band?

KHATCHIG

Why? You don't think they exist? (pause)
Synthetic Reevolution.

INT. GREEN ROOM - NIGHT

The band is putting on their orange jump suits and green plastic pyramid hats.

INT. HOSTEL LOUNGE - NIGHT

The bartender(s) are cleaning up the bar. The last few remaining travelers are getting up from the bar stools and making their way to the door. JACQUELINE is standing by two travelers at the computer who are in the process of shutting off the computer. JACQUELINE crouches down behind the computer to unplug the cord.

BARTENDER

(to travelers)
The main bar downstairs is open until half four.

Khatchig sits on his top bunk bed reading "Building a Universal Turing Machine." On the back of the book is a picture of the author, DR. Jhaitin. Khatchig is writing something on one of the pages in the book.

OVER THE SHOULDER shot of Khatchig writing out rows of characters on a scrap of paper.

XXXX##AAAA**A**#XX

XXXX##AAAA1#XX

. . .

On the inside of the book are the rules of of the Turing machine program that Khatchig is writing out.

EXT. HOSTEL HALLWAY - NIGHT

The travelers walk drunkenly down the hallway.

INT. HOSTEL LOUNGE - NIGHT

JACQUELINE and the bartender(s) walks out of the door into the hallway. They turn off a light on a lamp on the way out.

Khatchig watches them walk out of the door and then he puts down his book. He reaches for his suitcase that sits at the base of the top bunk bed. He flips it open and grabs the computer cord out of it.

As Khatchig climbs down from the bunk bed, the SLOVAK GUY on the opposite bunk is rolling a joint. The SLOVAK GUY licks and seals the cone joint.

Khatchig reaches behind the computer and plugs his cord into the computer. He then crouches down and plugs it into the wall. The SLOVAK GUY looks over at Khatchig inquisitively.

SLOVAK GUY

Co to robis? (subtitles) What are you doing?

Khatchig looks over at the SLOVAK GUY and raises his brow as if to say "What? I missed what you said.

SLOVAK GUY (CONT'D)

(accent)

What you do?

KHATCHIG

Oh nothing... I just have to kick off a few types of programs here, real quick... minimal coding.

Khatchig looks down at a cocktail napkin that he pulls out of his pocket.

Khatchiq'S POV

A crumpled napkin displays "Vienna" written in ink.

BACK TO SCENE

Khatchig starts typing away on the keyboard.

The SLOVAK GUY has a confused look on his face. After a moment he turns around and opens a window. He turns back around.

SLOVAK GUY

(accent)

You want?

The SLOVAK GUY holds up the joint for Khatchig to see. Khatchig looks over at the SLOVAK GUY, then over to LANA who sits on the couch in the corner reading a book, and then back to the SLOVAK GUY.

KHATCHIG

I better not. I'm going to have to get up early in the morning before everyone gets in here to see how these programs are doing.

SLOVAK GUY

(shrugs)

Yourself is suited.

The SLOVAK GUY strikes a match and lights the joint. He blows the smoke out of the window. "Pluralis" by Manuel Gottsching starts to play.

DOLLY IN on Khatchig typing away on the computer.

DOLLY IN on the SLOVAK GUY smoking on the top bunk and blowing the smoke out of the window.

DOLLY IN on LANA sitting on the couch.

DOLLY IN on Khatchig typing away on the computer.

CUT TO:

EXT. HOSTEL ROOF - NIGHT

It is nighttime over a decaying urban landscape. Lights from the tall buildings on the horizon twinkle.

INT. HOSTEL LOUNGE - MIDDLE OF THE NIGHT

It is completely dark and quiet in the hostel lounge now, lit only by the moonlight. We see LANA, SLOVAK GUY, another traveler, and Khatchig asleep in the bunk beds.

The computer is running programs. The computer monitor shows different 80s-computer green programs patterns being generated. The monitor displays different "network computer" numbers each time computer feed is changed, and a new program type is shown on the monitor.

DOLLY IN from above on Khatchig asleep in the bunk. As we get in close on Khatchig's eyes the screen fades to black and we enter into Khatchig's dream.

A 10-second vignette of 80s-computer green programs are composited etc.

EXT. HOSTEL ROOF - DAWN

The sun is rising.

INT. HOSTEL LOUNGE - DAWN

Birds chirp and light shines off of Khatchig's face as he slowly awakens.

The rest of the travelers in the bunk beds are still asleep and the rest of the lounge is quiet. Khatchig climbs down from the bunk bed.

The computer is still cycling through programs, displaying the programs that are being run on the network computers. Khatchig approaches the computer.

KHATCHIG

(to himself)

Still running...

He sits down in front of the computer and hits a few keys.

The monitor displays a blinking message that says "logging off network monitor disconect"

CUT TO:

Khatchig reaches behind the computer and unplugs his cord.

CUT TO:

Khatchig is putting on his tattered shoes. "Pluralis" by Manuel Gottsching begins to play.

CUT TO:

EXT. HOSTEL - DAWN

Khatchig leaves the hostel.

EXT. STREET - DAWN

Khatchig walks down the street.

EXT. A PATH NEAR A BODY OF WATER - EARLY MORNING

Khatchig walks down a path next to the river. He walks out onto a dam the juts into the river. He sits and stares out at the water. A mollusk shell with a cellular pattern sits on the shore next to Khatchig who sits Indian-style staring at the swirls and eddies in the water. He watches a flock of birds that circle the river and dart in different directions.

INT. CITY TECH'S COMPUTER LABS - EARLY MORNING

Rows of computers sit in quiet, unoccupied computer labs.

DOLLY IN on a flickering light on the base of a computer monitor and a hum that indicates the computer is at work. The computer monitors slightly pulse, and shots of 80s-computer-green programs are composited overtop of flickering monitors, to imply these programs are being run in the background on these computers, despite the fact that the computer monitors do not display the image. The 80s-computer-green program composites continue as...

FADE TO:

EXT. DAM - EARLY MORNING

Khatchig continues to sit and take in the misty morning surroundings.

FADE TO:

EXT. STREET - DAY

Khatchig is walking back towards the hostel. The computer program composites suddenly come to a stop and we see a blinking cursor that shows the computer has stopped and is awaiting more instructions.

Khatchig walks up to the hostel door.

FADE TO:

INT. HOSTEL LOUNGE - DAY

Khatchig is sitting at the computer logging back into the network. Static computer program that have been generated are on the monitor.

FADE TO:

The dot matrix printer is printing out the intricate designs of the programs that were run.

FADE TO:

Khatchig is tearing off the perforated printing track edges from the sides of the computer printouts.

FADE TO:

Khatchig stares at the printouts with a confused look on his face.

FADE TO:

RUUD taps his foot and shows Khatchig the computer sign-up sheet.

FADE TO:

JACQUELINE Gives a skeptical glare.

"Pluralis" by Manuel Gottsching fades out and the montage ends.

Khatchig stands at the continental breakfast spread. He wraps up a couple sausages in a napkin and puts it in his them in his back pocket. He then grabs a piece of celery with peanut butter and raisins and walks over in LANA's direction. He takes a bite of the "ants on a log", but his focus is on the printouts in his other hand.

KHATCHIG

It is not just cell progression programs... Look at this type of program. I ran 70,000 programs of a this type, and nothing interest arose. Then this one pops up.

Khatchig shows LANA a complicated picture of a Turing machine.

KHATCHIG (CONT'D) I think it's universal.

KHATCHIG (CONT'D)

And look at these programs...
rewrite systems, 2-dimentional cell
progressions, multiway
systems...they all exhibit it...
complexity arises out of
simplicity... it's not your
standard chaos theory; complexity
isn't injected into the system...

LANA

(accent)

Why do you care? Why is it important?

KHATCHIG

Because it doesn't make sense... and it should!

(pause)

The real world is messy... wars, relationships, love-or lack there of... it's a miserable place... If there is one place where there should be truth... certainty... it's in mathematics, in logic.

LANA

(accent)

That does sound reassuring...pero...No Se...

INT. HOSTEL LOUNGE - DAY

Soccer is on the old TV that sits on the corner of the bar.

Khatchig is sitting next to SERGEY and another traveler at the bar, watching a soccer game on an old TV. A goal is scored.

ANNOUNCER

(English accent)

Oh yes! What a goal! A splendid goal indeed!

(pause)

The rules are simple: Put the ball in the back of the net.

(MORE)

ANNOUNCER (CONT'D)

But the exquisite poetry that emerges sometimes is just breathtaking... Absolutely brilliant!... Look at that again.

We see a replay of the goal. Khatchig has a furrowed brow and an inquisitive look on his face. He starts mumbling quietly to himself, working through some logic in his head. He eventually blurts out...

KHATCHIG

But that doesn't make sense.

Khatchig realizes his inner monologue has just come out. The Eastern European Traveler at the bar thinks Khatchig remark was regarding the soccer game and takes objection.

SERGEY

(accent)

Of coure make sense. They have more shooting all game.

(pause)

Only the time matter.

Khatchig has a confused response.

SERGEY (CONT'D) (correcting himself)

...only matter the time.

Khatchig wanders over to his bunk. He lies down to think. His suitcase is on his bed. Khatchig takes his wallet out of his suitcase, opens it up, and a few coins fall out on his chest. He puts them back in the wallet and closes it back up. A conversation can be heard in the background.

MICKAÉL (O.S.)

(accent)

Are you going to be here on Sunday? My film is screening and they are having a dance afterwards...

FOREIGN TRAVELER (O.S.)

(accent)

Ahh, film. I make the still photography.

Khatchig just lies on the bed still pondering whatever thought was sparked by the soccer announcer.

MICKAÉL (O.S.)

(accent)

You do? Well, I do as well. (MORE)

MICKAÉL (O.S.) (CONT'D)

I just take 18 photographs in one second.

FOREIGN TRAVELER (O.S.)

(accent)

What?

MICKAÉL (O.S.)

(accent)

I just joking around... But really it is true... They call film the moving image, but it never really does... it only gives the illusion...

Khatchig's ears perk up and he leans up in bed. "Pluralis" by Manuel Gottsching picks up again. He still has an inquisitive look on his face, but his attention has now turned to the conversation that is going on at the couch.

CUT TO:

MICKAÉL and FOREIGN TRAVELER are seated around the coffee table. The 8mm film projector is in front of them. MICKAÉL has a 8mm film camera in his hand. He is holding the button of the 8mm cammera down and we we hear the clicking of the camera's pulldown claw.

MICKAÉL

(accent)

The camera just takes 18 photographs a second.

MICKAÉL puts down the camera and begins to rapidly clap his hands together while imitating the clicking sound of a film camera.

The following SLOW MOTION sequence will have quick flashes of the most recent computer programs that were run run on the network and then the mirroring shots of birds, turbulent fluid and eddies in the water, leaf patterns, shell patterns from the wing dam, the play that lead to the goal in the soccer game, a paper snowflake on the window, etc.

CUT TO:

DOLLY-IN on a shot of Khatchig as his eyes start to widen.

CUT TO:

SLOW MOTION DOLLY IN shot of MICKAÉL clapping his hands.

CUT TO:

SLOW MOTION DOLLY IN ON THE COMPUTER

CUT TO:

SLOW MOTION DOLLY IN shot of a slack-jawed confused look on the FOREIGN TRAVELER's face.

CUT TO:

SLOW MOTION DOLLY IN shot of Khatchig's eyes growing wider.

CUT TO:

A closer SLOW MOTION DOLLY IN shot of of MICKAÉL clapping his hands.

CUT TO:

A closer SLOW MOTION DOLLY IN shot of the slack-jawed Foreign Traveler.

CUT TO:

A closer SLOW MOTION DOLLY IN shot of Khatchig's epiphany. Khatchig darts off camera in the direction of the computer.

Khatchig then runs to the computer. 3 foreign traveler are on it and are playing Appalachian trail.

KHATCHIG

Are you going to be long?!

TRAVELER 1

We just resumed our game.

The Appalachian Trail computer game is on the computer. It is a rip off of Oregon Trail.

TRAVELER 1 (CONT'D)

There's a sign up sheet at the bar.

Khatchig rolls his eyes and walks over to the bar. A beautiful foreign girl is bartending.

KHATCHIG

Where is the sign-up sheet for the computer?

BARTENDER

Let me see.

KHATCHIG

People need to see this. I think I just realized something huge.

RUUD

We've seen it already.

KHATCHIG

Not you... somebody who actually has the mental capacity to appreciate what I am talking about...

(to bartender)

I need to print off some programs.

She bends down to look behind the bar. A traveler at the bar spills something (or something) and Khatchig gets a huge stain on his shirt.

TRAVELER 2

Oh shit. I'm sorry dude.

The Bartender sees Khatchig is upset. She reaches into a jar of change. She begins to sift through them in her hand. She picks out two gold tokens and gives them to Khatchig.

BARTENDER

(accent)

Here. You can use this to do a load of wash and dry at the laundromat.

KHATCHIG

Thanks, but did you find the signup sheet for the computer.

BARTENDER

Don't worry. Go do your wash. The computer will be here when you get back... You'll be next on the list.

Khatchig stares at her. Beat.

KHATCHIG

(acquiescing)

Where's the laundromat?

TRAVELER 3

(accent)

It's by the arcade. We're going there now. Come on, we'll show you.

Bartender flashes a look at Khatchig that says, "see, you'll be fine." Khatchig sighs and acquiesces.

ACT II

EXT. DECAYING STREET - DAY

Khatchig walks down the street with the foreign travelers. He is carrying his suitcase. The HOMELESS MAN stands on the other side of the road and watches them pass by. One of the foreign travelers attempts to make small talk.

FOREIGN TRAVELER 2

(accent)

So you like the computers?

KHATCHIG

Like? I guess you could say that, but I don't think that adequately sums up my thoughts and feelings about their importance.

The foreign travelers, who are walking just behind Khatchig, flash skeptical looks at each other that show they are not sure what Khatchig is alluding to.

KHATCHIG (CONT'D)

I think we may be living in a computer simulation... I have some evidence... some models.

The foreign travelers now flash looks at each other behing Khatchig's back that say, "Oh my god, what is he talking about? This guy is crazy."

EXT. LAUNDROMAT - DAY

Khatchig veers off to the laundromat as the foreign travelers. He tips his imaginary hat to them to say thank you.

The travelers continue walking to the arcade. Once they are out of earshot range one of the travelers says...

FOREIGN TRAVELER 2

Galen.

(subtitles) Crazy.

INT. LAUNDROMAT - DAY

There is a HISPANIC MAN folding his laundry next to the washer where Khatchig stands. Khatchig turns his suitcase upside down and empties his laundry into the wash. He takes the shirt off that he is wearing and puts it in the wash. The HISPANIC MAN and Khatchig pause for a second and exchange looks as Khatchig stands shirtless. A mysterious musical interlude plays. Khatchig reaches into the washing machine and pulls out a different shirt and puts it on. He then looks into the washer, sees his wallet and the computer cord, picks them out, throws them into his suitcase and walks off camera which stays on the HISPANIC MAN for a beat.

EXT. DECAYING STREET - DAY

Khatchig is walking the street with his suitcase in his hand deep in contemplation.

EXT. BODEGA - DAY

Khatchig walks into the bodega. A STREET MUSICIAN is playing the "Computer Love" melody by Kraftwerk on a recorder-type-ofinstrument in front of the bodega. His hat is placed out for tips in front of him.

INT. BODEGA - DAY

Khatchig is standing in one of the bodega isles looking at bags of chips. He then pulls out his wallet, opens it up, and dumps four coins into his hand. Khatchig begins counting the change in the palm of his hand. He then looks up.

Khatchiq's POV

Khatchig looks at a customer in another corner of the store who is using a mechanical chilli and cheese dispenser to put condiments on his hotdog. Khatchig then looks at the check out counter and a man putting his change in the give-a-penny-take-a-penny dish.

BACK TO SCENE

Khatchig stops and thinks.

CUT TO:

Khatchig's hands place a small bag of tortilla chips on the counter. As the Indian Owner rings Khatchig's chips up, a science magazine that sits in a rack behind the counter catches Khatchig's eye. Dr. Jhaitin is on the cover standing in front of an array of old looking computers and lights. It catches Khatchig's eyes and he does a double-take.

Khatchig"S POV

ZOOM IN on Dr. Jhaitin on the magazine cover.

BACK TO SCENE

OWNER

(accent)

Srimana

Khatchig looks up. The Owner stand next to the register which reads "3 1/7". He stares at Khatchig who is counting the change in his hand. Khatchig puts the change that he has in his hand on the counter. He then reaches to get some coins out of the give-a-penny-take-a-penny dish

KHATCHIG

(to himself)

You know, it would just be easier if I...

Khatchig dumps the change that is in the give-a-penny-take-a-penny dish all over the counter. One of the coins starts to roll away towards the counters edge and Khatchig slaps it flat against the counter. The OWNER rolls his eyes. Khatchig starts counting through how much money is on the counter. A customer who waits in line behind Khatchig rolls his eyes and sighs.

OWNER

(Indian accent)
Please go. It is fine.

Khatchig opens the bag of chips as he walks over to the corner of the store where the hot dog roller and the chilli and cheese dispenser sit.

The owner is ringing up the customer that now stands at the counter. All of a sudden, the noise of the mechanical chilli and cheese dispenser can be heard. The Owner looks over.

Khatchig is holding his bag of chips under the dispenser, dousing them in chilli and cheese.

OWNER (CONT'D) (Indian accent)
Hey! Hot dogs only!

Khatchig looks up surprised.

INT. BARCADE - DAY

Two or three foreign travelers hover over a large stand-up arcade style video game. One of the travelers frantically slams the joystick and smashes the buttons while the others cheer him on in a foreign language. The reflections of the travelers are seen against the screen which displays a knockoff of early-80s arcade game with very basic graphics such as Defender.

EXT. BODEGA - STREET CURB - DAY

Khatchig sits on the street curb outside of the bodega. His greasy mitts are covered with cheese wiz. He is deep in contemplation.

INT. LAUNDROMAT

A WOMAN places her laundry basket up on a ledge next to a washer. She opens up the washer Khatchig was using and takes his clothes out and transfers them to a dryer a few machines down.

EXT. BODEGA - STREET CURB - DAY

Khatchig still sits on the curb eating his super nachos deep in contemplation. He has cheese wiz and chilli on his hands and around his mouth. He takes a chip out of the bag that is covered with chilli and cheese. He takes a bite but half of the chip breaks and falls down out of frame.

Khatchiq'S POV

Khatchig holding out his shirt which has a big glob of cheese whiz on it. He begins to lift the shirt to his mouth.

RETURN TO SCENE

He lifts the shirt all the way to his mouth to eat the cheese whiz. Just as he is doing this we hear heals clicking, and a pair of beautiful, out-of-focus, female legs cross in the near foreground.

He has a look of remorse and sadness as he slowly lowers his shirt from his mouth and watches the girl pass by into the convenience store. We hear the door to the convenience store open.

EXT. DECAYING STREET - DAY

Khatchig is walking back to the laundromat with his suitcase in his hand but now he has a big wiz stain on his shirt.

EXT. LAUNDROMAT - DAY

Khatchig walks into the laundromat.

INT. LAUNDROMAT - DAY

A different HISPANIC MAN is now in the laundromat. Khatchig opens the washer where he left his wash only to find it empty. He does a quick look in the washer next to him. Nothing. He then frantically checks the other washers and driers. No clothes. He runs to the door.

EXT. LAUNDROMAT - DAY

Khatchig frantically runs through the door and looks down the street both ways.

KHATCHIG

Son of a... clothes are gone!

INT. LAUNDROMAT - DAY

Khatchig comes back in through the door.

KHATCHIG

(frantically)

Where are my clothes? Do you know what happened to them? Somebody must have seen something. Did your friend take them? Huh?

The other HISPANIC MAN just backs off with a scared look on his face. Khatchig then yells across the room to the one other person in the laundromat, an asian girl.

KHATCHIG (CONT'D)

How 'bout you? You see anything?

The girl just has a puzzled look on her face.

ASIAN GIRL

Tteonajuseyo. (subtitles)
Please go away.

Khatchig just gives a confused glare in her direction. He then turns around and runs out the door. He looks down the street in both directions and then takes off to the left.

EXT. LAUNDROMAT - DUSK

JIMMY JIB shot of the HISPANIC MAN stepping outside the door to watch Khatchig run off down the street.

HISPANIC MAN_2

Tiene la cabeza loco.

INT. HOSTEL LOUNGE - DUSK

We start with a Close Up shot of 8mm film being held to the light stretched between two thumbs. The hands are scanning through the footage, running lengths of film between the thumbs in a rhythmic motion. We slowly dolly back to reveal Mikeal running film through his hand. The dolly back transitions into a pan around to see Khatchig coming through the door, shoulders drooped. He looks over to see somebody on the computer. He lets out an annoyed sigh.

KHATCHIG

(to Bartender)

I thought you said I was next?

BARTENDER

Cool it. They'll be off in a minute.

SERGEY and A TRAVELER who are sitting at the computer playing Appalachian Trail, turn around and give Khatchig a glare.

Khatchig puts his suitcase up on the bar, and sits down on a stool. He looks over towards the reading corner. LANA, who is holding a book, and a handsome guy holding a magazine, sit on the love seat smiling and talking. Khatchig has a hurt look.

BARTENDER (O.S.) (CONT'D)

How did the wash go?

Khatchig slowly turns and just flashes a look that shows he is not happy.

KHATCHIG

Somebody stole my clothes.

BARTENDER

(chuckling)

What?

KHATCHIG

Seriously. It's like they saw me coming.

The Bartender has a confused/skeptical look. Khatchig turns his attention back to the corner where LANA sits flirting. After a moment, he shakes his hand in LANA's direction and says...

KHATCHIG (CONT'D)

Forget it. Give me a porter.

The bartender opens a bottle of beer and puts it on the bar in front of Khatchig.

BARTENDER

Will that be cash?

KHATCHIG

Just put it on MARCELL's tab. He's a buddy of mine. I think he's in room 2B.

BARTENDER

Ummmm...

KHATCHIG

(across the room)

Hey MARCELL, it's 2B, right?

MARCELL looks over to the bar area. Khatchig holds up his beer and nods.

KHATCHIG (CONT'D)

2B?

The Bartender looks over for MARCELL's reaction. MARCELL has a confused look, but then seems to understand what he is being asked. He nods unsure.

KHATCHIG (CONT'D)

(to MARCELL)

Grazie, buddy. I'll get you back.

The Bartender shrugs her shoulders and walks back to her an accounting style calculator to put the drink on MARCELL's tab. She presses a few numbers and then hits enter triggering the calculator to print the amount on the receipt spool.

KHATCHIG (CONT'D)

(to Bartender)

That's MARCELL, in 2B.

Khatchig takes a sip of beer and looks back in LANA's direction.

Khatchig'S POV

The guy she sits next to is putting the magazine back on the rack that sits next to the couch and looks for something else to read. LANA senses someone looking at her and she turns her head in Khatchig's direction. Her face now is only half visible behind one of the support columns. There eyes lock for a second. The smile on her face fades.

BACK TO SCENE

Khatchig turns away. He tries to shake it off. He takes a sip of beer but then puts his head in his hands staring down at the ground. He then lets out a deep sigh and looks up towards the rest of the bar. He does a double take.

A pretty Eastern European Girl who is sitting a few stools down at the bar is looking in his direction. Khatchig looks surprised. A nervous look of concentration washes over Khatchig's face as he tries to figure out how he is going to break the ice. Behind Khatchig, in the background, is a tall, muscular guy looking through the records.

KHATCHIG (CONT'D)

Hey there.

The Eastern European Girl shakes her head annoyed. She then takes her beer bottle and taps the top of Khatchig's beer sending vibrations through his bottle causing it to overflow into his lap. Khatchig looks down and just watches his beer overflow onto his shirt. He has a defeated and embarrassed demeanor.

EASTERN EUROPEAN BEEFCAKE (O.S.)

Nie widzialem tego albumu.

(subtitles)

I didn't see the album.

A tall and muscular guy has come up behind Khatchig to talk to his girlfriend.

EASTERN EUROPEAN GIRL

Nic nie szkodzi. Chodzmy.

(subtitles)

Never mind. Let's go.

The Eastern European Girl takes her eyes off her boyfriend for a second and looks over at Khatchig, which causes the Eastern European Beefcake to look over as well. Khatchig just sits motionless staring at his beer bottle dripping beer all over his shirt. The Eastern European Beefcake has a confused look on his face as he did not see what just transpired. He then whisks his girlfriend away and they exit the room.

Khatchig sits defeated and motionless, staring down at his beer. The Bartender approaches.

BARTENDER

I think the computer is open now.

Khatchig looks up. He stands to go walk over to the computer but he is stopped.

BARTENDER (CONT'D)

You can't bring your drink with you. You have to drink it at the bar.

Khatchig chugs the remaining half of a beer and then slams the bottle down on the counter. This causes LANA to look over. Khatchig walks over to the computer.

KHATCHIG

Fuck it.

(pause, to MARCELL)
Fuck it, you know, MARCELL?

MARCELL

No...

KHATCHIG

All I'm saying is, you know, got to stay focus on what's important... like getting these programs printed out.

MARCELL

Programs? Like those ones before?

KHATCHIG

Similar... I think I may have figured out nature's secret for how it generates complexity so effortlessly.

MARCELL

What?

KHATCHIG

OK, the old thinking was: Everything is Number; God is a Mathematician. The new thinking is: Everything is 0s and 1s, God is a programmer.

MARCELL

What do you mean the "old thinking?"

KHATCHIG

I mean the Greeks... Pythagoros. (pause)

Why don't you work on getting us another couple beers, while I kick off some programs. I'll tell you all about it when you get back.

Khatchig gives MARCELL a pat on the back as he sits down in front of the computer.

There is a montage with Khatchig running 80s green programs, printing out lots of programs on the dot matrix printer, tearing off lots of the perforated edges from the printouts, examining patterns, drinking beer, explaining stuff to MARCELL, etc. The montage transitions back to normal mode in the middle of the conversation.

KHATCHIG (CONT'D)

...maybe math isn't as general as we think. Maybe the kind of math we use to describe physics is just a result of the path human civilization just happened to take.

MARCELL

What?

KHATCHIG

I'm finding lots of systems where complexity emerges from very simple programs. Things that look like, snowflakes, fluid turbulence, flocks of birds, animal patterns, plant growth, biology!, nature!, DNA! physics!... Maybe you can't reconcile the world with calculus and continuous mathematics.

MARCELL

What?

KHATCHIG

Maybe there is one bit of small code, and all this richness in the world is just a consequence.

MARCELL

A program?

KHATCHIG

But it has to be simple and elegant. It has to be highly compressed in order to encapsulate all the physical laws and complexity of biology. It probably won't even be reconizable at that level of compression.

MARCELL

Start making sense or I am taking back the beer.

KHATCHIG

Occam's razor, "lex parsimoniae"... Scientists are always looking for the most simple and elegant ways to explain phenomenon... seemingly disparate ideas get unified and integrated into a common theory which are often expressed as sets of mathematical equations... It's a similar idea, except I am looking for the one simple program that can explain it all. Maybe it's just a few lines of code recursively executed...

MARCELL

A few lines of code?

KHATCHIG

Sure. The idea is to minimize the input - the program... and maximize the richness of the output... The rules should always be simpler than what they describe, or else there is always a reason-the reason itself... like adding an axiom to deal with incompleteness in mathematics...

(MORE)

KHATCHIG (CONT'D)

it's the equivalent of someone saying "just because" when you ask for a reason.

(pause)

Have you ever heard of Langrangian Interpolation?

MARCELL

What do you think?

While he is explaining this Khatchig takes something wrapped in a paper towel out of his back pocket. It is two croissant from the continental breakfast that are squashed together from being sat on. Khatchig takes them apart, and starts to eat one of them. He then spreads out the napkin on the bar. He then interrupts AN ARTIST who is inking a M.C. ESCHER-ESQUE DRAWING with a DIP PEN at the bar.

KHATCHIG

Can I borrow this?

The artist hands the dip pen over confused. Khatchig then reaches across her and dips the dip pen in her INK BOTTLE. He then whips the pen in the direction of the napkin so a splattering of dots go on the napkin. Khatchig notices that some of the ink splattered on his shirt as well.

KHATCHIG (CONT'D)

Shit.

Khatchig makes a failed attempt to get the ink of his shirt, while MARCELL and the artist exchange confused and concerned looks at each other.

MARCELL

(to Khatchig)

I'm not sure I-

Khatchig turns his attention away from the ink stains on his shirt back to what he was talking about.

KHATCHIG

Fuck it, alright. My point was, you might think that this splattering of dots was random, but there is always an equation for a line that goes through these points... There is always a theory to explain the results.

MARCELL and the artist exchange more looks of confusion as Khatchig attempts to write the equation Lagrangian Interpolation formulas on the napkin. The formulas come out looking blotchy and rather messy.

KHATCHIG (CONT'D)

...but if I explicitly wrote out the equation of the line it would be rather long and complicated... it was constructed to fit the results..." fort composée "... so there is always a reason, there is always a law if you allow them to be so complicated... So what one strives for is an elegant explanation... if it's not simple, small, elegant, compressed... the notion of a physical law becomes vacuous...

ARTIST

Are you done with the pen?

Khatchig hands the dip pen back. The artists doesn't give a second thought to what Khatchig was trying to explain and just goes back to inking her drawing.

KHATCHIG

So while traditional physicist are looking for elegant mathematical formulas based on differential equations, the infinitesimal, continuous mathematics such as calculus, I am looking for the elegant piece of digital code to explain the universe.

(pause)

No measurement has ever been taken with an infinite level of precision. A digital, finite, discrete universe... This is going to be a whole new direction for science.

MARCELL

(accent)

You've lost me, but I don't know, maybe you're-

Khatchig waves a flattened piece of the croissant he is eating in MARCELL's face as his says the following:

KHATCHIG

The problem is, radical ideas like this will only get published and taken seriously if it comes from someone within the establishment, someone with some credibility... you know what I am saying?

MARCELL nods.

KHATCHIG (CONT'D)

...and I know just the guy.

MARCELL

Who?

KHATCHIG

He has a background in program-size complexity. He won the nobel prize for extending Godel's incompleteness theorem... plus he has a background in physics.

MARCELL

Who?

Khatchig holds up "How to Build a Universal Turing Machine" and points to the picture of Dr. Jhaitin on the back cover.

KHATCHIG

Dr. Mercury Jhaitin. If there is anyone who will understand and appreciate my work, it will be him.

MARCELL

You know him?

KHATCHIG

Not really. But I'm going to send him some of my programs in an electronic message. Plus, I'll mail him some of those printouts for reference. He teaches at City Tech.

There is an overhead shot of the splattering of dots on the napkin. An 80s-computer-green line connecting the dots is composited over top, and the long Lagrangian-interpolated equation for the line scrolls across the bottom of the screen.

INT./EXT.

Shot of Band

INT. HOSTEL LOUNGE - NIGHT

JACQUELINE

(French accent)

We need to discuss the check.

KHATCHIG

I am just as eager to get it as you are... The band's good for it.

JACQUELINE

(French accent)
Digital Reevolution?

KHATCHIG

Yeah...

JACQUELINE

(French accent)

They're playing at Que Sera, Sera in a few days.

KHATCHIG

What?

JACQUELINE

(French accent)

I found a listing in the music section of the paper.

KHATCHIG

Really?

JACQUELINE

(French accent)

I want you to call the box office and leave a message for the band.

KHATCHIG

What?

JACQUELINE

(French accent)

I just want to make sure they have the correct address.

KHATCHIG

(hurt) Seriously?

Khatchig sighs and looks away. He turns in the direction of the old TV on the bar. There is a natural-geographic type of show. A macro lens shows a magnified shot of an ant holding a spherical aphid droplet it has just harvested.

SHOW NARRATOR

(English accent)

It's fascinating what the world looks like at this scale...
...where water tension allows an ant to pick up an aphid droplet like a ball...

(pause)

...So different then what we as humans are accustom to...

Khatchig expression changes from hurt to contemplation. While Khatchig stares at the old TV, JACQUELINE looks through the paper and starts dialing the number.

There is a close up of the numbers on the ROTARY PHONE next to the finger that dial. 2... 3... 5...

CUT TO:

CLOSE UP of Khatchig's eyes that stare at the TV.

CUT TO:

The fingers continue to Dial: 7... 1... 1....

CUT TO:

CLOSER UP of Khatchig's eyes zoning out on the nature show.

JACQUELINE (O.S.)

(French accent)

Here, it's ringing.

Khatchig is pulled out of his trance.

KHATCHIG

What? You dialed!?

JACQUELINE

(French accent)

Here, just take it. Quick.

JACQUELINE forces the phone on Khatchig. It is ringing, but it isn't an American ring. Khatchig is annoyed and about to say something to JACQUELINE when somebody picks up. Khatchig puts the phone to his ear.

KHATCHIG

(glaring at JACQUELINE)
Oh hi... is this the ticket window?

JACQUELINE watches over Khatchig's conversation intently.

KHATCHIG (CONT'D)

I need to leave a message for someone... actually it's a band that is playing there in a couple days...

(pause)

ok...

CUT TO:

INT. HOSTEL LOUNGE - NIGHT

Khatchig sits zoning out on top of the bunk bed. The SLOVAK GUY who sits on the opposite top bunk, strikes a match and lights a joint. He opens the window behind him. He offer of a drag to Khatchig.

KHATCHIG

(stressed)

Ok, but I need to get up early. I need to check on an electronic message... see if I got a reply... make some print outs.

Khatchig takes the joint and takes a drag. He coughs and laughs. He seems much less stressed now.

SLOVAK GUY

Na zdravie.

KHATCHIG

(laughing)

Nas bravie.

The SLOVAK GUY laughs.

INT. HOSTEL LOUNGE - MORNING

JACQUELINE is cleaning up the table where the continental breakfast was. The lounge is filled with travelers.

Khatchig wakes up looking a little groggy. He looks over at the SLOVAK GUY lying in the top bunk opposite him. He then looks at his Calculator Watch.

Khatchig's POV

The watch reads 10:37 with the number 2.7182818 above the time.

BACK TO SCENE

KHATCHIG

You were suppose to wake me up.

SLOVAK GUY

Spat'

KHATCHIG

We missed the continental breakfast. What I am going to do for food now?

The SLOVAK GUY just rolls over and goes back to sleep. Khatchig gets down from the top bunk. He walks by the computer where a traveler is playing Appalachian Trail.

KHATCHIG (CONT'D)

(patting him on shoulder) Let me know when you are off.

Khatchig then walks over to the bar.

KHATCHIG (CONT'D)

Do you have the university's phone number?

BARTENDER

City Tech?

Khatchig nods. The bartender looks around for a second and then finds a business card and hands it to Khatchig.

KHATCHIG

Thanks.

Khatchig looks at the card for a second.

KHATCHIG (CONT'D)

Can I use the phone?

BARTENDER

Is it a local call?

KHATCHIG

(confused)

I need to call the university,

BARTENDER

Oh.

The bartender hands Khatchig the rotary phone. Khatchig begins to dial.

RUUD sits at the far end of the bar with a cynical look on his face as Khatchig dials the number.

KHATCHIG

(on phone)

Hello. Is this the administration office?

(pause)

I need to get in contact with Dr. Jhaitin. Do you have his address? (pause)

I already sent him an electronic message. I need his home address to send him some papers.

(pause)

No, I am not a current student but he will be expecting these papers. They're very important.

(pause)

Well, they're programs if you must know.

(pause)

Yeah.

(pause)

Well, when will that be?

(pause)

No, that's too long. He really needs to see this stuff. It's really important.

RUUD watches Khatchig skeptically.

KHATCHIG (CONT'D)

Ok, I see. Well, I don't agree with that policy...

(pause)

So there is nothing you can do? (pause)

Ok.

INT./EXT.

Band scene

INT. HOSTEL LOUNGE

Khatchig has a confused look on his face as he leafs through some of the printouts that sit on his suitcase. He starts to flip through the pages frantically.

KHATCHIG

(to himself)

Son of a- some of the printouts are missing... somebody stole some...?

He looks around the hostel lounge at the SLOVAK GUY, at JACQUELINE, at RUUD, and finally LANA. He then looks back at the computer printouts. Beat.

CUT TO:

Khatchig is on the computer. He is writing code.

CUT TO:

On the event pole that is plastered with flyers is one that reads "World Première Film, Dance After, Lounge Upstairs, 27/8, 21:30."

CUT TO:

MARCELL

How long will you have to run it?

KHATCHIG

Who knows? I am thinking... I am hoping that it is a rather simple and elegant code, so if start with the shortest programs, and check them in order of complexity, then hopefully it won't take forever. Of course there is the question of how many steps do I need to run the program, and after how many steps will I know if it is our universe or not, and how will I know...

Khatchig thinks about this for a second and then goes back to writing code.

KHATCHIG (CONT'D)

(typing)

I want you to watch out for this computer while I am gone. You can let other people use the computer, just make sure that girl doesn't log on to the network again or she may screw up what I have running. You know?

MARCELL nods.

MARCELL

(accent)

Where are you going?

KHATCHIG

I need Dr. Jhaitin's address, and I can't afford to just wait around for him to get back to me... who knows if he even checks his electronic messages during the summer.

(pause)

I am going to the tech's campus. I'll get it somehow. Somebody will know it.

CUT TO:

EXT. DECAYING STREET

Khatchig walks down the street.

INT. COMPUTER LABS

We see the shot of the computers running in the labs similar to the shot earlier.

EXT. CITY TECH CAMPUS

Khatchig reaches the city campus. He tries to open the door to one of the buildings but it is locked. He continues on his journey to find someone to talk to. He passes a little gourmet pizza shop. He stops to look at the little pizzas behind the display case. You can see the hunger in Khatchig's eyes. Khatchig notices the CHEF is focused on making a pie at the far end of the counter, so he discreetly reaches behind the display case and grabs a pizza.

Khatchig's hand brushes the case and makes a noise causing the chef to look up and see Khatchig stealing the pizza. Their eyes lock for a second before Khatchig takes off with the pizza running past the crowds of people. The chef comes out running from the store a few seconds later, but is 60 yards back. Khatchig runs past crowds of people. He looks back to see if he is still being chased. The chef is still in pursuit although still 50 yards away. Khatchig scans in different directions trying to figure out where to run, but something catches his eye. He does a double-take.

Khatchig'S POV

The HOMELESS GUY is on the opposite side of the street/subway tracks/walkway. He is wearing Khatchig'S SHIRT that he was wearing at the start of the film.

BACK TO SCENE

KHATCHIG

Is that my shirt?

Khatchig looks back to see the chef at about 40 yards. He turns back towards the homeless guy wearing his shirt.

Khatchig'S POV

Now there is an old man with his back to Khatchig conversing with homeless quy.

BACK TO SCENE

KHATCHIG (O.S.) (CONT'D)

Is that Jhaitin?

Khatchig'S POV

ZOOM IN on an exchange: The old man with his back to Khatchig hands something to the homeless guy and the homeless guy hands him an envelope or something small back. It's hard to tell from the distance and because it is a crowded area.

BACK TO SCENE

Khatchig has a look of confusion on his face. He looks back at the chef who is about 20 yards away. Khatchig looks back quickly in the homeless guy's direction with a confused look on his face then shakes his head, and takes off running. Khatchig is chased a little while more, before he loses the chef.

EXT. DECAYING STREET

Khatchig walks down the street and eats the last couple bites of the pizza. He has a look of contemplation on his face.

INT. HOSTEL LOUNGE

MARCELL sits at the computer playing a computer game.

Khatchig comes up from behind him.

KHATCHIG

Hey.

MARCELL

(accent)

How'd it go? You get his address?

KHATCHIG

No, something came up. I'll get it later. How's everything here?
Nobody has logged on to the network, have they? That girl wasn't back, was she?

MARCELL

No, I haven't seen her. You know that guy SERGEY, he was playing a game earlier, but he was the only other person on the computer.

KHATCHIG

Good. Can I check on my programs see how they are doing... to see if they've done anything interesting.

MARCELL

Sure.

MARCELL stands up and Khatchig sits back down at the computer.

Khatchig types in the username and password to get on to the network. We watch his expression change from confusion to frustration as he continues to type away.

KHATCHIG

(annoyed)

What the...

MARCELL

(accent)

What?

KHATCHIG

Most of the network computers haven't run many programs at all. They're running something, but not producing any output.

(pause)

I wrote code to check, but something's not right...

(pause)

Great, first I run into Jhaitin but don't get to talk to him, now this...

MARCELL

You saw him?

KHATCHIG

I think Jhaitin may be in cahoots with whoever that guy was who stole my clothes... I saw an exchange... I think it was Jhaitin... It was definitely my shirt... Now I have to deal with this.

Khatchig stares at the computer monitor which shows that many of the network computers are just looping, but not generating an output.

KHATCHIG (CONT'D)

Look. Most of them are just spinning their wheels on program on some routine and aren't producing any getting anywhere.

He gets up from the computer.

KHATCHIG (CONT'D)

I wrote code that was suppose to take care of that. It was going to check to see if the program would run indefinitely or eventually come to a... halt...

(pause)

Oh my god, of course!

MARCELL

What?

It's Turing's halting problem.

MARCELL

Holding problem?

KHATCHIG

Halting. Like to come to a stop. Halt. Turing basically showed there is no systemic approach to see if a given program will stop or just keep running forever until you have just start banging on the keys for it to stop-"Escape, Escape"... It's directly tied in with Godel's incompleteness theorem...

MARCELL

Ummm...

KHATCHIG

Ok, here's a proof by contradiction. Let's just suppose there was an algorithm you could write that would check to see if a given program was going to stop. Then suppose this algorithm was checking the program that essential said something like the following: "IF the Reimann hypothesis is true of course we would explicitly write that out in a mathematical way -THEN write some output and stop. ELSE - if the hypotheis is false do some loop." Of course I am assuming that the Reimann hypothesis is one of the true and unprovable statements under the current axioms of mathematics.

MARCELL

What?

KHATCHIG

Nevermind... it just goes to show you, how difficult of a task this is going to be?

MARCELL

What task?

The task of searching for the code that will be the code for our universe. This shows that there isn't an easy and systematic way to do just look through the space of all possible programs.

RUUD overhears this and laughs at the grandiose nature of what Khatchig has just said.

RUUD

(Dutch accent)

Oh Khatchig, you're so full of shit!

KHATCHIG

You know, RUUD... If you would stop and think about things for just a second you might realize-

RUUD

(Dutch accent)

It's all bullshit! Do you think you are going to explain all the wonders of nature and life with some rinky dink code? The world is made up of atoms, not black and white cells in a computer.

KHATCHIG

You make a convincing argument, I'll give you that... but I don't think you've fully vetted your oppinions for the actual truth...

MARCELL

(to RUUD)

You just don't want to listen! You don't want to learn!

RUUD

(Dutch accent)

Oh yeah?

KHATCHIG

It's ok, MARCELL.

MARCELL

He's always putting people down.

KHATCHIG

MARCELL, it's ok!

MARCELL

But I'm only trying to help.

KHATCHIG

I don't need your help!

MARCELL

But I'm only trying-

KHATCHIG

MARCELL!

(to RUUD)

You got nothing better to do then just sit around poking your nose in other people's business?! What makes you a physics expert, anyway?

RUUD

(Dutch accent)

What makes you? You don't even have a university degree.

MARCELL

What are you talking about? He went to City Tech which is better than wherever you were educated.

RUUD

(Dutch accent)

He couldn't cut it. He failed out.

KHATCHIG

I didn't fail out, they kicked me out... Who told you that anyway?

RUUD

(laughing)

Don't worry, you... Just some little bird.

Khatchig stands up in an aggressive manner.

RUUD (CONT'D)

What'ya got Einstein?

Khatchig has a fit of rage and charges at RUUD and does a jumpkick.

KHATCHIG

Hi-yah!

RUUD dodges the jumpkick but their bodies still collide and they fall to the ground.

SERGEY comes over and tries to help MARCELL break up the scuffle. RUUD and Khatchig are separated.

RUUD

(to MARCELL)

You're sticking up for the wrong man. He's a raging lunatic... and he's not even your friend.

Khatchig gives a nervous laugh at RUUD's assessment and then looks over at MARCELL and LANA for their reactions. LANA's expression seems to show that she agrees with RUUD's assessment. MARCELL is still thinking, deciding whether he agrees with RUUD. After a beat.

MARCELL

(calmly to RUUD) Fuck you, RUUD.

Khatchig scared look turns to a huge smile and he chuckles at MARCELL's uncharacteristically abrasive language. RUUD glares in contempt at MARCELL and Khatchig.

All of a sudden, a foreign traveler, Constantine, who is sitting at the computer slams the keyboard down and gets up, cursing up a storm in another language.

CONSTANTINE (O.S.)

Hebeportho! Aepbmo!
 (subtitles)
Unbelievable! Bullshit!

The loud commotion turns LANA, RUUD, SERGEY, MARCELL, and Khatchig's attention over to Constantine, and distracts them from the argument at hand.

INSERT

On the computer monitor the screen is Appalachian Trail. There is a message bubble on the screen that says "Constantine has died of typhoid fever due to poor sanitation."

INT. HOSTEL LOUNGE - NIGHT

Khatchig sits on the bunk with a sad look on his face as he stares out of the window which has a paper snowflake. In his hand are computer program printouts. He looks at them but then gives a heavy sigh of hopelessness. The SLOVAK GUY lights a joint.

SLOVAK GUY

(Slovak accent)

You want?

KHATCHIG

(no energy or emotion)

OK.

The SLOVAK GUY opens the window to exhale his smoke.

SLOVAK GUY

(Slovak accent)

It's so stupid. This shit should be legal.

KHATCHIG

(indifferently)

I guess.

SLOVAK GUY

(Slovak accent)

Where is the stuff that shouldn't be legal?

Khatchig looks confused as he hands the joint back. The SLOVAK GUY twitches his nose. Khatchig shakes his head no.

SLOVAK GUY (CONT'D)

(Slovak accent)

I do.

Khatchig looks hesitant.

CUT TO:

EXT. SHADY ALLEYWAY IN CITY - NIGHT

Khatchig and SLOVAK GUY walk down a shady alley.

KHATCHIG

You know I don't have money, right?

SLOVAK GUY

What?!

(Pause)

Kid, kid you. I know... I need someone to come with me. It's dangerous.

Khatchig looks terrified.

As SLOVAK GUY and Khatchig walk around the bend in the dark alley they see a woman that looks like an old prostitute sitting in a chair that props open the door to a shady looking bar. She is juggling knives and the smoke from her cigarette is lit by the red light above the bar door.

Khatchig looks nervous as they approach.

SLOVAK GUY (CONT'D)

(Slovak accent)

It's ok. The talking is leave it to me.

They approach the prostitute. Khatchig stands a step behind the SLOVAK GUY.

SLOVAK GUY (CONT'D)

Salutations.

OLD PROSTITUTE

(accent)

You have identification.

SLOVAK GUY

(Slovak accent)

We not staying long.

The SLOVAK GUY gives a nod and a look to see if the Prostitute is on the same page. She nods ok. SLOVAK GUY walks by her and Khatchig goes to follow him into the bar but he is stopped.

OLD PROSTITUTE

(to SLOVAK GUY)

He waits here.

(to Khatchig)

You can keep me company.

The prostitute smiles at Khatchig who looks petrified. SLOVAK GUY gives a nod of reassurance to Khatchig to let him know everything will be fine. He then goes inside the bar.

Once the SLOVAK GUY goes inside the Old Prostitute looks up at Khatchig who stands nervously. She begins to cackle, and start to juggle knives again. Khatchig looks as if he is going to start crying.

CUT TO:

EXT. CITY STREETS - NIGHT

Khatchig and RUUD walk very quickly down the street away from the alley where the bar was.

KHATCHIG

You almost got us killed.

SLOVAK GUY

Relax.

KHATCHIG

What did you get?

The SLOVAK GUY pulls out a matchbox full of cocaine, and a bag that has weed, mushrooms, and some tabs of acid in it.

KHATCHIG (CONT'D)

GEEEZZZZ!

The SLOVAK GUY laughs.

KHATCHIG (CONT'D)

Ok, put it away.

The SLOVAK GUY stuffs the drugs back in his pocket and laughs some more. They continue to walk quickly down the street.

EXT. HOSTEL COURTYARD - NIGHT

Khatchig and SLOVAK GUY walk into the courtyard. They see MARCELL across the courtyard.

KHATCHIG

Hey, there's my friend MARCELL.

SLOVAK GUY

(yelling)

Hey MARCELL!

MARCELL looks over and sees Khatchig and the SLOVAK GUY. They wave him over. MARCELL crosses the courtyard.

KHATCHIG

Hey, how's it going?

SLOVAK GUY

We plan to smoke. You want?

The SLOVAK GUY holds up a joint they are about to spark. MARCELL looks a little surprised, but tentatively agrees.

The SLOVAK GUY sparks the joint, takes a puff, and then passes it to MARCELL. As MARCELL takes a puff of the joint, the SLOVAK GUY takes the bag of drugs out of his pocket and holds it up for MARCELL to see.

SLOVAK GUY (CONT'D)

There is more where from that is.

MARCELL looks a little taken aback at the amount and variety of drugs they have procured. MARCELL shakes his head no as he coughs out a cloud of smoke. He passes the joint to Khatchig.

As Khatchig takes a drag of the joint, we hear a noise and a voice from the shadows on the other side of the courtyard.

MARCELL

Did you hear that?

Khatchig, MARCELL, and SLOVAK GUYs are bugged out. They stand motionless and quiet for a second staring at each other with nervous looks. Khatchig waves for them to follow him, and they quickly tip toe towards a door to the hostel, away from where the sound came from.

INT. HOSTEL DOWNSTAIRS HALLWAY - NIGHT

Khatchig opens the bathroom door and waves them in quickly.

SLOVAK GUY

Shhhh

INT. BATHROOM - NIGHT

MARCELL and SLOVAK GUY look around nervously for a place to hide. MARCELL opens up a stall door and the three of them cram in and close the door behind them.

INT. BATHROOM STALL - NIGHT

The three of them are packed in the stall trying to be completely still. They listen nervously. MARCELL is breathing very heavily from being nervous.

SLOVAK GUY

(to MARCELL)

Shh

MARCELL looks even more scared now and begins to breath even heavier.

SLOVAK GUY (CONT'D)

(to MARCELL)

Shhh

MARCELL

(mouthing)

What?

The SLOVAK GUY blows air out of his nose heavily mimicking MARCELL's breathing.

There is a noise of the door opening out in the hallway. They all get incredibly still and quiet and look scared to death.

There are footsteps in the hallway. The expression on their faces slowly relax as they hear the footsteps continue down the hallway, away from the bathroom. All of sudden the SLOVAK GUY looks around and realizes how ridiculous they would look if someone found them.

SLOVAK GUY

This ridiculous. Open up.

MARCELL opens the stall door and they spill out.

INT. HOSTEL BATHROOM - NIGHT

The SLOVAK GUY takes the drugs out of his pocket. He licks his pinky and then dips it in the matchbox full of cocaine. He then takes his pinky and then rubs it in between his lip and the gum of his mouth.

SLOVAK GUY

Here, eat this.

SLOVAK GUY hands Khatchig a handful of dried mushrooms from a plastic bag. Khatchig looks hesitant. The SLOVAK GUY offers some to MARCELL.

SLOVAK GUY (CONT'D)

(to MARCELL)

You want?

MARCELL shakes his head no. SLOVAK GUY is surprised that MARCELL has turned him down, so he holds up a tab of acid thinking that maybe MARCELL wanted a different type of drug instead. MARCELL shakes his head no with a look that says, "Are you crazy?"

Khatchig stares at the mushrooms and then at MARCELL and RUUD. He then throws the handful in his mouth and begins to chew them. They taste gross.

KHATCHIG

Am I suppose to feel something?

SLOVAK GUY

Give an hour.

MARCELL and Khatchig exchange worried looks.

"Echo Waves" by Manuel Gottsching starts to play as Khatchig looks down at his calculator watch.

Khatchiq's POV

The time on the calculator watch reads 9:37.

FADE TO:

The time on the calculator watch reads 10:40.

BACK TO SCENE

An experimental montage trip starts. A lot of the exposition of Khatchig's theory comes out in this trip. The overly technical subject matter will enhance the surreal and mysterious world Khatchig inhabits. Themes/ideas/motifs for the montage include the following:

Analog vinyl records, 8-bit arcade games, 80s-computer-green computer program composites, Finite vs. infinite/discrete vs. continuous/digital vs. analog, Algorithmic information theory, A flipbook, Rolling dice, Turing Machines, War scenes, A network of connection on 80s-computer-green world map, GTCAGAATCAGACTAAAG sequences, DNA as the evolution of mutating software, A machine that builds a smaller machine that builds a smaller machine..., Fluid Motion, Plant Growth, Animal pigmentation patterns, Exponential vs. linear growth, Quantum mechanics as pseudo-randomness, Godel's incompleteness theorem, Irrecucible Comlexity,

Epistomology,
Etc.

This montage will be visually spontaneous and have music-video-creativity freedom. At one point during the trip, Khatchig is on the bongos singing "I gotta have my orange juice, juice, juice, juice, I gotta have my orange juice," as an homage to Richard Feynman. The band dressed in their orange jumpsuits and green plastic pyramid hats will make an appearance. Khatchig stares at one of them as he moves discretely across the frame while Khatchig's movement in the frame is continuous. At the end of the trip a voice whispers to Khatchig, "it needs to be simpler."

EXT. COURTYARD - MORNING

LANA is walking out of the hostel door. She looks over.

LANA

(gasp)

She hurries over to the other side of the courtyard where Khatchig is passed out in a shrub.

LANA (CONT'D)

Jesus, Khatchig, are you ok?

She shakes Khatchig awake. Khatchig slowly comes to and seems very disoriented and confused as to why he is in a shrub. LANA helps him stand up. She puts her arm around Khatchig to help support him since he is still under the influence.

LANA (CONT'D)

What were doing in that shrub?

Khatchig has a half-intoxicated glazed over look in his face.

LANA (CONT'D)

You have to be looking after yourself.

INT. HOSTEL HALLWAY - MORNING

LANA walks Khatchig who has his arm draped around her down the hallway. LANA is having a difficult time getting Khatchig to walk a straight path.

LANA

If JACQUELINE would have found you, you'd be kicked out.

INT. HOSTEL LOUNGE - MORNING

LANA walks Khatchig over to the bunk bed. Khatchig notices the continental breakfast is out.

KHATCHIG

(pointing weakly)

Get some sausages while they're out?

LANA

Ok, just lay down.

LANA helps Khatchig lay down on her bed, rather than attempting to get him to climb the ladder to the top bunk.

EXT. ROOF - MORNING

SLOVAK GUY is passed out on the roof in nothing but his underwear. His shirt and pants are balled up under his head for a pillow. The bag of drugs lies on the roof next to him.

INT. HOSTEL LOUNGE - LATE AFTERNOON

MARCELL has joined Khatchig, who is still recovering, at his bedside.

MARCELL

Can I get you anything?

KHATCHIG

(weakly)

Could you get my suitcase down? I want to look at some of the printouts again.

MARCELL takes Khatchig's suitcase down from the top bunk and hands it to him. Khatchig opens it and takes out some printouts that show grids of black and white cells. Khatchig is still stumped.

KHATCHIG (CONT'D)

(shaking his head)
Something tells me these programs
aren't simple enough... there is
too much built into them... it has

to be more general, but...

MARCELL

Have you heard back from that guy, Dr...?

Khatchig just shakes his head and flashes a look that says, "Don't ask."

KHATCHIG

(continuing his thought)
...but maybe it's useless anyway...
maybe the program won't tell you
anything... maybe it's just like
the sieve of Eratosthenes.

MARCELL

(accent)

Greek?

KHATCHIG

Yeah.

MARCELL gives Khatchig a nod of assurance like he's on the same page and knows about the sieve.

As Khatchig describes Eratosthenes Sieve there is an 80s-computer-green composite of a mechanical representation of the sieve being applied, knocking off numbers that sit in squares on a number line.

KHATCHIG (CONT'D)

You start out with a list of the positive integers... but then you apply this really simple rule that starts eliminating some of the numbers... and the numbers that don't get eliminated are defined as the primes... numbers that can't be split up into equal pieces... like the number 7, you can't split 7 apart and get equally sized pieces...

Khatchig's fingers traces the outline of a rectangle in midair. A composite of seven 80s-computer-green squares joined together forming a rectangle. Khatchig breaks the imaginary rectangle into two smaller rectangles 3 and 4 squares long, by snapping his wrists like he is snapping a stick.

KHATCHIG (CONT'D) (snapping sound effect) Chuch

He holds the two pieces side by side to show they are not of equal height. He then fuses the pieces back together into a row of 7 squares again.

KHATCHIG (CONT'D)

(fusing sound effect)

Shhusshsss

He then snaps his wrist twice...

KHATCHIG (CONT'D)

(snapping sound effect)

Chuch, chuch

...breaking the floating 80s-computer-green rectangle row of squares into smaller rectangles of length 2, 2, and 3 squares long. He puts them side by side.

MARCELL just shakes his head with a look on his face that says, "this guy is out of his mind." From his vantage point, he does not see the 80s-computer-green composite, only a strung out Khatchig playing with something imaginary and making sound effects.

KHATCHIG (CONT'D)

The only way to get equal size parts is to break it down into it's most basic components... chuch, chuch, chuch, chuch, chuch, chuch...

MARCELL has a look on his face that suggests he may not be sure of Khatchig's sanity.

KHATCHIG (CONT'D)

Anyway, so we have this mechanical procedure that will generate all the prime numbers.

The 80s-computer-green composite of the sieve generating prime numbers zooms out so that the prime numbers turn to a scattering of glowing 80s-computer-green dots. The seemingly random yet systematically dense pattern of prime numbers is revealed.

KHATCHIG (CONT'D)

...but you know, a physicist looking at something that generated prime numbers in nature would probably use a formula like n over log n to make predictions...

(MORE)

KHATCHIG (CONT'D)

they would say, "look at how statistically accurate the model is, we can get so close to the right answer... off by only two parts in a trillion... it has to be right..."

MARCELL

It's not?

KHATCHIG

No! The primes aren't statistical. They're not probabilistic. They're determined ahead of time. Remember the sieve I was just telling you about?

MARCELL

Irat...?

KHATCHIG

Eratothenes, yes. That sieve generates the primes. It's a simple rule, a simple process, a simple program. It's deterministic.

KHATCHIG (CONT'D)

A physicists statistical approach for making predictions about the primes might be quicker and highly accurate, but it is not the reality. Predictions could be made exactly... given enough time to make the computation.

(pause)

There is no randomness in the distribution of the primes, only complexity. I think the same thing might be going on in the quantum world.

MARCELL

What are you talking about?

KHATCHIG

Epistemology!... the limits of understanding!... provability!... incompleteness! life! death! god! everything!

MARCELL

What?

I have no idea.

MARCELL

Are you serious?

KHATCHIG

I think my main point was that even if I could find the code, maybe it won't tell us much... maybe it will just take too much computing power to know ...maybe this won't change anything...

Khatchig looks depressed by what he has just said.

KHATCHIG (CONT'D)

I need you to do something for me.

MARCELL

What is it?

KHATCHIG

Can you kick off some programs for me on the network? I'll write down the instructions on what to do and the code for the programs. It'll be really easy.

MARCELL

Ok.

KHATCHIG

Can you also follow up with Jhaitin for me?

MARCELL

What's this all about?

KHATCHIG

I guess I am still holding out hope that some of this stuff I am doing matters... that I am making some sort of progress.

Khatchig starts to write down some instructions on the back of one of the computer printouts. The pencil he is writing with keeps ripping through the paper since he is using the quilt to write on. Eventually, he grabs his suitcase to write on.

MARCELL

(facetiously)

So if we are living in a computer simulation, what does that say about these programs I am about to run?

Khatchig stops writing and looks up at MARCELL.

KHATCHIG

(seriously)

That's the smartest question I've heard anyone ask in a long time.

MARCELL

I was just joking.

This remark seems to knock Khatchig's confidence down a notch.

CUT TO:

LANA is standing at the bar. She glances at a religious pamphlet in her hand. She then looks at Khatchig laid up in bed hungover, talking to MARCELL. She shakes her head and looks concerned.

CUT TO:

MARCELL is walking away with the printout Khatchig was writing instructions on.

KHATCHIG

(to MARCELL)

Let me know if you have any problems.

LANA walks up to Khatchig's bedside where MARCELL just was.

LANA

Hey

KHATCHIG

Hey

LANA

How are you feeling?

KHATCHIG

OK

LANA

Can I sit down?

Khatchig nods.

LANA (CONT'D)

I found this downstairs by the check-in.

LANA hands Khatchig a religious pamphlet that has the words "Faith", "God", and "Salvation" on it.

KHATCHIG

Give me a break. Are you serious?

LANA

What?

KHATCHIG

This isn't for me.

LANA

Why do you say that?

KHATCHIG

If you want me to take a leap of faith, at least let there be plausible evidence.

(pause)

I mean, if you asked me to believe the Riemann hypothesis I'd say,"Ok, I don't know if it's true but I'll take your word... I'll go on faith." But this...

LANA

I'm just worried about you.

KHATCHIG

I'm through with drugs.

LANA

I'm glad to hear that, but it's not just that, it's...

KHATCHIG

Do you think I am crazy?

T₁**ANA**

I never said that.

KHATCHIG

Then what?

LANA

You spend all your time on whatever it is you are working on, but with nothing to show... no money, wearing the same stained shirt, living off croissants and sausages you stash away... not taking care of yourself... it's no way to live... it's not sustainable...

KHATCHIG

You know, it's not just money or a big house or 2 and half kids or whatever else that makes people happy... it's not always a straight path... I mean maybe this is what I should be doing... maybe this is the level I should be living at... the level that makes me the happiest.

LANA

Are you happy?

KHATCHIG

(pause)

No, not really.

LANA sighs in a concerned way.

KHATCHIG (CONT'D)

Listen, I appreciate your concern. I'll be ok.

LANA smiles. Khatchig leans up in bed as if he is going to kiss LANA, but she turns her head. Khatchig stops with a confused look on his face. LANA turns back to Khatchig and then looks around the lounge at other travelers as if to say, "I don't feel comfortable kissing you (in front of all these people)."

LANA

Let me get you some more water.

LANA gets up off the bed and walks away. Khatchig looks hurt.

CUT TO:

LANA is at the kitchen counter filling up a glass with a pitcher of ice water.

On the way back to give Khatchig his water she stops to talk to MARCELL who is sitting at the computer typing away as he references the instructions Khatchig has written down for him. LANA looks over at Khatchig.

LANA'S POV

Khatchig is rubbing his head trying to soothe a headache as he studies one of his printouts.

BACK TO SCENE

LANA (CONT'D)

I'm worried about Khatchig.

MARCELL

I know. Me too.

LANA

Does he have any family?

MARCELL

I don't know.

They look over at Khatchig who is staring at his printouts with intense concentration. He is feverishly writing stuff down on the paper.

LANA

We need to get him away from this work of his for a little bit. It isn't good to be so obsessed.

MARCELL

I know. What do you suggest?

TIANA

...fresh Air?

CUT TO:

EXT. HOSTEL ROOF - DUSK

MARCELL and LANA stand on the roof looking up at the colors of the dusk sky. Khatchig sits with his back against the roof wall and his head in his hands. He is spitting between his legs to stave off nausea.

KHATCHIG

I'm not sure why we're up here when I have stuff I should be doing.

LANA and MARCELL attempt to ignore Khatchig's negative attitude.

LANA

Venus is suppose to be visible tonight, in the early evening sky.

MARCELL

Do you think there is other life out there? Intelligent life.

LANA

I don't know, but I think I might feel even more alone if there was.

MARCELL

Why?

LANA

I guess it would just make me feel more insignificant.

(pause)

I don't know, it might just be the mood I'm in. I think traveling has this effect on me.

KHATCHIG

Have you ever heard of the Drake equation?

LANA

I don't think so.

KHATCHIG

It's a formula that tries to estimate how many planets with intelligent life are in our galaxy.

Khatchig hangs his head between his legs to spit onto the roof in order to stave off puking. He then continues.

KHATCHIG (CONT'D)

Some people have used the equation and estimated that there are thousands of intelligent civilizations in the Milky Way alone...

(MORE)

KHATCHIG (CONT'D)

but it relies on a lot of estimates on things such as the number of planets in the galaxy that are suitable for life, the probability that life arises on those planets, the conditional probability that given life has arisen, the chance intelligent life capable of producing technology emerges.

LANA

Hmmm...

KHATCHIG

(pause)

But I think the most suspect variable in the whole equation is the conditional probability given intelligent life has arisen, the fraction of a planet's lifetime that is marked by a technological civilization.

MARCELL

Why do you say that?

KHATCHIG

Well it may be that soon after intelligent life capable of technology emerges it destroys itself.

You can tell Khatchig is still struggling with his hangover. He puts his head in his hands and spits between his legs. LANA and MARCELL look at each other.

KHATCHIG (CONT'D)

So maybe there is no other life out there.

(pause)

It's probably hopeless, just like the current state of physics...
Haven't they heard of Zeno's paradox? Reductio ad absurdum?
Digital Physics is the only real hope we have for absolute truth.
Without it, all we can hope to know is just finite bits in an infite abyss... the infinitesimal, sheesh... Do you believe in it?...
I sure as hell don't... it's only an idea, and I find very little evidence to support it.

MARCELL and LANA look at each other with concerned looks as Khatchig continues to hang his head between his legs to fight the nausea.

MARCELL

Did you ever hear the joke about the group of philosophers sitting around eating dinner?

KHATCHIG

No.

MARCELL

So they're all sitting around the table philosophizing and enjoying their dinner when one of the philosophers notices the one next to him isn't eating; He's just staring at his food. The one philosopher asks, "Why aren't you eating your dinner?" The other philosopher replies, "Because I am not sure if it exists." The philosopher asks him to explain so he continues, "I may only be seeing the light reflecting off my food, and not the food itself... so how do I know if my food really exists?" Well, the philosopher had no answer to this, but he did go back to enjoying his dinner... And the philosopher that couldn't make that inference-that the light reflecting off his food, entering his eye, implied the existence of his food- fell by the wayside due to hunger.

KHATCHIG

That joke doesn't really have a punch line, and I'm not sure I get your point.

MARCELL

My point is, what does any of this matter? You're thinking too hard about all of this nonsense... and you're the one who will be falling by the wayside.

I realize some of the stuff I say might seem crazy, but just think about how crazy what we already know is... Imagine we are lying out under the stars in the countryside just a few hundred years back and I tell you we live on this ball that spins around in space, half of us sticking upside down...somehow held on by some mysterious force, circling around some other flaming ball that makes some special kind of fire that allows all life on Earth to exist, you would think I was crazy... But now you accept that and it seems normal.

MARCELL

Suit yourself... (to LANA)

I know he doesn't want to hear it from me so maybe you should tell him. He'll listen to you.

Khatchig looks over at LANA who has a look in her face similar to a relative who has to break the news of a death in the family. Khatchig feels as though everyone is against him. Et tu, LANA, Et tu?

INT. HOSTEL LOUNGE - NIGHT

Khatchig is asleep in his top bunk bed. Several 80s-computergreen programs showing the evolution of networks of connections is composited over Khatchig as he sleeps.

INT. HOSTEL LOUNGE - MORNING

Travelers are in the lounge going about their business. The continental breakfast is out on the table. SLOVAK GUY is asleep in the top bunk opposite to Khatchig. MARCELL comes over to wake Khatchig up.

MARCELL

Don't you want to get some breakfast while it is out?

Khatchig doesn't turn his head to face MARCELL. He just makes a groaning noise to indicate he is not interested.

KHATCHIG (groaning "no" noise)

MARCELL has a look on his face that makes it seem as though he is worried Khatchig may be mad at him.

MARCELL

Ok

MARCELL walks away.

CUT TO:

RUUD is sitting at the bar eating a biscuit and having some tea. The sound of the dot matrix printer printing is heard in the background. LANA is on the rotary phone talking to someone at the bar. JACQUELINE is talking to the bartender, explaining a memo she holds in her hand. The dot matrix printing sound stops.

MARCELL returns to Khatchig's bunk.

MARCELL (CONT'D)

(apologetically)

Hey, I brought you these printouts. I thought you mike like to see them.

Khatchig turns his head this time, but still remains laying down.

MARCELL (CONT'D)

It's some of the results from the programs you asked me to run.

Khatchig lifts his head and opens his half-closed, dreary eyes a little wider. MARCELL hands printouts to Khatchig.

Khatchig studies the results for a minute. DOLLY-IN on Khatchig's eyes as they grow wide in amazement.

KHATCHIG

(whispering)

Oh my god. I think that's the Riemann curvature tensor used in the Einstein equations.

MARCELL

What did you say?

I think I'm seeing space-time curvature in some these results. I have to check the numbers.

Khatchig gets up and runs to the computer.

He starts feverishly typing away. He brings up some statistics on the programs he has just run.

KHATCHIG (CONT'D)

(in amazement)

It's matching exactly.

Khatchig presses a few more keys. Khatchig and MARCELL look at a rotating, evolving, 80s-computer-green network of connections on the computer.

KHATCHIG (CONT'D)

Don't you see?

MARCELL

See what?

KHATCHIG

It's just a network of connections following an updating algorithm... There's no notion of space or time. General and special relativity emerge out of almost nothing!

MARCELL

Ummm...

KHATCHIG

...And special relativity holds too; everyone measures the same speed for light. And these tangles in the network could be matter!

(pause, amazed)

We're getting it... from bit.

MARCELL

But the world isn't made up of these networks. It is made up of atoms and-

KHATCHIG

Well, this emergent phenomenon might just be the result of whats below the Planck length and Planck time. Did you ever think of that?!

MARCELL

Of course not. I have no idea what you are talking about.

(pause)

So who wrote the code? God?

KHATCHIG

Maybe... but God may be some high school kid in a parallel universe. Life may have meaning, but we may just be helping to compute 10 to the trillionth digits of pi for this kid.

MARCELL

(shaking his head)
This all sounds...

KHATCHIG

I need to talk to Jhaitin now! I reproduced Einstein's equations out of almost nothing. General and special relativity out of something so simple, so elegant... it has to be right. Don't you understand?

MARCELL

Not really. Are you saying you found the program?

KHATCHIG

Well, no. But I found the class of programs. Some-not all-of those programs you ran for me are exhibiting this phenomenon. One of them has to be... Jhaitin needs to see this!

(thinking)

Did you send Jhaitin these programs or just the others?

MARCELL

Not these. Just the ones you told me.

Khatchig gets up in a hurry and walks over to his bunk bed to look through the printouts in his suitcase.

(to MARCELL)

I am going to need you to send those programs you just ran for me in an electronic message to Dr. Jhaitin. I have to check to make sure I have-

RUUD walks over towards towards the computer and interupts their conversation.

RUUD

Easy. What's the rush?

KHATCHIG

The rush? There's probably people all over the world right now on the verge of the same discovery.

RUUD

("so what?" attitude)
...And I have to check on some business. The computer is for everybody.

KHATCHIG

For the first time in the history of human civilization, this level of computing power is starting to become cheaper and more widely accessible... We're at the dawn of the digital age. Soon computers will be everywhere and this digital philosophy that I am talking about will be widely accepted.

RUUD

(laughing)

Computers are going to be everywhere?

KHATCHIG

(serious)

Everywhere.

RUUD

Not everyone is some nerd like you willing to pay lots of money for some toy to play games on.

Wait and see. They are going to become exponentially cheaper, faster, smaller, and end up by changing every aspect of our lives, including our own biology... And it's going to happen, just like that.

Khatchig snaps his fingers and has a very intense look on his face.

RUUD lightens up a little towards Khatchig. He seems to find his eccentric personality endearing.

RUUD

(friendly)

Why are you such a crazy bastard?

KHATCHIG

Because things need to make sense.

Khatchig walks over to the bar.

KHATCHIG (CONT'D)

Can I get a porter?

The bartender looks at her watch, shakes head, but then goes to get a beer.

KHATCHIG (CONT'D)

You can put it on MARCELL's tab.

She flashes a look as if to say "are you sure that's ok?" but continues to get the beer. She puts the beer on the bar for Khatchig. She rings up the beer on the old accounting calculator with a paper receipt spool.

Khatchig starts to walk away from the bar.

BARTENDER

You have to drink the beer at the bar.

Khatchig rolls his eyes, but then grabs a seat at one of the bar stools. Khatchig sits there thinking for a minute, then leans down below the bar. A few seconds later he pops up with a dirty sock in his hand. He puts the beer in the dirty, stained sock. He then picks the sock-cozied beer up in one hand, and his shoe in the other, and walks unevenly over to the computer to make some printouts.

Khatchig places his sock-covered beer down by the computer. He takes a swig and then starts typing away. A moment later we hear the dot matrix printer running.

JACQUELINE approaches.

JACQUELINE

We are going to need to start charging you for all the printouts you are making.

KHATCHIG

(continuing to type) Fine just put it on my tab.

This gets under JACQUELINE's skin.

JACQUELINE

Are these printouts for your big theory?

KHATCHTG

What's it matter?

JACQUELINE

This computer is for everyone's use, not just yours.

KHATCHIG

Well I wouldn't have to print out so many copies if you had tighter security around here. Somebody took a lot of my printouts the other day.

JACOUELINE

Why would someone take your computer print outs?

KHATCHIG

I don't know... they're trying to steal my ideas?... pass them off and submit them as their own?

JACOUELINE

Nobody is trying to steal your work. Nobody wants your work.

Khatchig just stares back at her.

JACQUELINE (CONT'D)

Is that a beer?

No.

JACQUELINE

Listen, I'm not sure if this arrangement is working out.

KHATCHIG

Just give me a little more time, god damn it! I'm working on something big!

JACQUELINE shakes her head in frustration.

KHATCHIG (CONT'D)

I've narrowed down the space of all possible programs to a specific class of programs. So now I am just going to have to do an exhaustive search of this subspace... It's still a huge task, but it might be doable with use of the network.

JACQUELINE

The network?

KHATCHIG

Nevermind. Just give me a little more time, I promise. I'll prove it to you. I got some pretty definitive evidence now.

JACQUELINE shakes her head and still has a hesitant look.

KHATCHIG (CONT'D)

By this time tomorrow you'll have your money, and I will have been vindicated.

JACQUELINE considers what to do.

CUT TO:

EXT. DECAYING STREET - DAY

Khatchig walks quickly down the street.

EXT. CITY TECH CAMPUS - DAY

Khatchig walks through the urban campus.

INT. CITY TECH ADMINISTRATION OFFICE - DAY

Khatchig enters the admin office. Looks around and then spots someone behind a counter and walks over to ask a question.

KHATCHIG

Hello?

ADMINISTRATION LADY Oh, hello. How may I help you?

KHATCHIG

I need to get in contact with Dr. Mercury Jhaitin. Do you have his address?

ADMINISTRATION LADY Are you the one who called earlier?

KHATCHTG

No.

The administration lady looks skeptical.

ADMINISTRATION LADY I can't give you that information, but if you give me a second...

The administration lady starts typing away on the computer behind the counter.

ADMINISTRATION LADY (CONT'D)

...I can give you his name for sending him an electronic message.

KHATCHIG

(sighs)

I already sent him an electronic message but I doubt he checks them during the summer.

(pause)

I need his address. I really need to speak with him. It's urgent.

ADMINISTRATION LADY

I am not at liberty to give out faculty addresses.

KHATCHIG

Do you have it right there on your computer?

ADMINISTRATION LADY

I am not allowed to give out faculty addresses.

Khatchig shakes his head and sighs in an annoyed fashion.

KHATCHIG

Fine. Fine. Well do you have any literature on physics classes you are offering here in the fall? I was thinking of taking one.

The administration lady gives a skeptical and confused look.

ADMINISTRATION LADY

We have a catalog of course descriptions?

KHATCHIG

Yeah, that'll due.

The administration lady shakes her head and then walks over to an adjacent room out of view. We hear her opening a filing cabinet. Khatchig stretches his head to check out the rest of the administration office to make sure nobody else is around. He then backpedals a few steps and then runs and throws his body over the counter. He makes a loud commotion as he falls ungracefully to the floor on the other side. Khatchig stands up and looks at the computer. The admin lady comes from the other room to inspect the commotion. She lets out a gasp when she sees Khatchig behind the counter looking at the computer.

ADMINISTRATION LADY

(gasp)

Khatchig and her lock eyes for a second. She looks terrified. Khatchig then turns his eyes back to the computer quickly.

INSERT

Khatchig's hand traces the name Mercury Jhaitin across the screen of data. His fingers stop under his address, 127 Tivoli Lane.

KHATCHIG

(whispering to himself)

127 Tivoli

BACK TO SCENE

Khatchig looks back over at the admin lady who is clutching the wall in fear. He then jumps back over the counter wiping out again. He picks himself up and runs out of the door.

INT. HOSTEL LOUNGE - DAY

The rotary phone is ringing. The bartender behind the bar picks it up.

BARTENDER

Hello?

(pause)

What?

(pause)

Ok, hold on.

The BARTENDER puts her hand over the receiver and turns to SERGEY who sits at the bar.

BARTENDER (CONT'D)

(to SERGEY)

Can you go find JACQUELINE? There is a guy from some band who said they got a message to call her.

INT. CITY TECH ADMINISTRATION OFFICE - DAY

The admin lady that Khatchig just scared half to death is dialing a phone. She walks to a little away from the phone stretching the cord to see if she can see Khatchig through the door. Someone picks up.

ADMINISTRATION LADY

Hello? Is this Dr. Jhaitin?

(pause)

Hi, this is the Admin Office

calling. I'm sorry to interrupt,

but it's very important.

EXT. HOSTEL EXTERIOR - DAY

Khatchig is approaching the hostel very quickly. He opens the door and goes inside.

INT. HOSTEL LOUNGE - DAY

A few travelers are hanging streamers and other decorations for the dance. Someone else is setting up the 8mm projection screen. LANA is on the rotary phone.

LANA

(Spanish accent)

Well, I talked to someone at the train station earlier.

(pause)

I am trying to figure out which train I should take.

(pause)

Will you be there to retrieve me?

Khatchig comes in to the lounge. He passes a couple travelers who have their big backpacks on, and makes his way across the room to his bunk bed.

BARTENDER

Wait, Khatchig.

Khatchig takes his suitcase which sits on the top bunk, and the computer printouts that are all over his bed, and quickly shoves them in the suitcase, and snaps it shut.

BARTENDER (CONT'D)

JACQUELINE needs to talk to you.

Khatchig turns to acknowledge the Bartender but continues to backpedal to the door to leave.

KHATCHIG

Give me just a little more time. I've got it!

He runs right into someone holding a pie who is also not paying attention.

PIE HOLDER

Shit.

KHATCHIG

Shit, sorry.

The collision hardly slows down Khatchig at all, despite the fact he now has pie on his shirt.

KHATCHIG (CONT'D)

I can't- I have to go.

Khatchig runs out the door.

A traveler at the bar who is sitting next to a pie cuts the traveler another slice.

The bartender rolls her eyes and shakes her head. RUUD, who sits at the bar just shakes his head as well.

MARCELL walks up to the bar wearing a jacket and carrying a bag.

MARCELL (to Bartender) Have you seen Khatchig?

EXT. DR. JHAITIN'S HOUSE - DAY

Khatchig approaches a small Victorian house perched upon a hill. Khatchig stands outside the chain link fence that surrounds the house looking up at it. He looks down at the address written on a piece of paper in his hand. A small dog on the other side of the fence wanders over to where Khatchig is standing and looks up at him. It gives a slight growl but it is not too menacing.

KHATCHIG

Hey there, buddy. It's ok. Just coming to talk shop.

The dog begins to growl slightly louder. Khatchig reacts. The dog lets out a bark. Khatchig looks around nervously to see if anyone is looking and then turns back to the dog.

KHATCHIG (CONT'D)
Easy there, buddy. Ok, ok, I think
I got something for you.

Khatchig reaches into his pocket. He takes two sausages wrapped in a napkin out. He tears off a piece of sausage from one of the links and holds it through the fence for the dog to eat. The dog goes for the sausage in Khatchig's hand, but the handoff falls to the ground and bounces to Khatchig's side of the fence. The dog nuzzles it nose down to the opening at the bottom of the fence reaching for the sausage piece that stays just out of its reach. Khatchig tries to kick it to the other side so the dog can eat it, but the follow-through from his kicks at the sausage are coming close to hitting the dog's snout that is reaching under the fence for the sausage nugget.

KHATCHIG (CONT'D)

Back up. Back up.

The dog seems to listen. Khatchig takes another swipe at it and manages to kick the sausage nugget just far enough to the other side of the fence for the dog to eat. The dog flops down on the ground and has a friendly whimper as it gnaws away at the sausage.

Khatchig is please with his work, so he takes the other sausage out of the greasy napkin and treats himself to a nice big bite.

KHATCHIG (CONT'D)

One for you, one for me.

The dog finishes the sausage and looks back up at Khatchig and barks. Khatchig chucks the rest of the dog's sausage link over the fence as far as he can throw it. The link lands about 30 yards away. The dog chases after it.

KHATCHIG (CONT'D)

Go get it!

Khatchig shoves the rest of his sausage in his mouth. With his mouth still full, he takes a few quick steps back to pick up some speed and then runs and jumps and attacks the chain link fence, climbing to the top. As Khatchig gets to the top to pass his body over to the other side he starts to lose his balance.

KHATCHIG (CONT'D)

Shit.

He falls awkwardly off the top. It looks certain that he is going to wipe out, but he somehow manages to stick the landing, hopping and stumbling a little before bringing himself under control. He looks completely amazed that he hasn't wiped out. He raises his hands in triumph. All of a sudden, we hear a bark.

CUT TO:

The dog is running back towards Khatchig.

CUT TO:

Khatchig's ecstatic look turns to one of terror as he sees the dog coming towards him. Khatchig swallows hard (the rest of his sausage down and in fear) as the dog runs up to him.

KHATCHIG (CONT'D)

I don't have anymore.

Khatchig nervously pets the dog on the head to try to calm it down.

KHATCHIG (CONT'D)

It's gone... gone.

The dog starts to growl.

KHATCHIG (CONT'D)

Shh... Shhh

Khatchig looks around nervously to see if anyone around the perimeter of the fence, or in the house, sees him. While Khatchig is preoccupied, the dog starts to sniff Khatchig's pocket, nuzzling it's nose in to find more sausage. Khatchig looks down startled to see the dog. He jumps back and then reaches into his pocket, takes out the greasy napkin that held the sausages, and throws it on the ground.

KHATCHIG (CONT'D)

Here, Take it. That's all I got.

The dog bends down to sniff the napkin. Khatchig takes this opportunity to walk away from the dog. The dog soon realizes there is nothing edible in the napkin and quickly catches up to Khatchig. The dog starts making a pouting noise.

KHATCHIG (CONT'D)

(nervously)

Shhhhhhh.

Khatchig starts to pick up his pace a little bit. He is essentially speed walking. The dog picks up it's pace and starts to bark a little louder. Khatchig breaks into a sprint. The dog starts running after him barking. Khatchig starts to cut back and forth across the yard trying to lose the dog, but it stays close on his heels.

KHATCHIG (CONT'D)

Shit!

INT. NOBEL PRIZE WINNER'S HOUSE - DAY

We are looking out through old warped glass windows surrounded by lace curtains. Khatchig runs back and forth. He is now doing small circles to try to lose the dog.

The professor walks over and looks out of the window.

DR. JHAITIN

Oh Jesus.

MRS. JHAITIN (O.S.)

(from other room)

What is it?

DR. JHAITIN

(casually and annoyed)
Oh I think it's what that phone call was about.

EXT. NOBEL PRIZE WINNER'S YARD - DAY

With the dog still on his tail, Khatchig frantically looks around for options. He sees the fence and makes a break for it. Khatchig runs and jumps onto the fence to try to evade the dog but his hand slips and he eats it, falling to the ground. The dog jumps on top of him. He shakes it off, gets up, and starts running again. With the dog chasing after him once again, Khatchig starts to run for the house. He runs up the steps and into the house.

INT. HALLWAY OF DR. JHAITIN'S HOUSE - DAY

Khatchig runs in with the dog trailing behind him. He hangs a right into one of the rooms and slams the door behind him. The dog barks and scratches at the door.

INT. STUDY OF DR. JHAITIN'S HOUSE - DAY

Khatchig is bent over and out of breath.

DR. JHAITIN How'd you get in here?!

Khatchig looks up surprised to find himself in the same room as the Nobel Prize Winner. The dog is still barking and scratching at the door from the other side.

KHATCHIG (out of breadth)
Just hear me out.

Mrs. Jhaitin enters the study from an adjoining room.

MRS. JHAITIN

Oh my god! Do you want me to call the police?

Khatchig gives an "oh no" look. Dr. Jhaitin can tell he is crazy but harmless.

DR. JHAITIN

No, it's alright.

DR. JHAITIN (CONT'D)

(to Khatchig)

Isn't it?

Khatchig still bent over out of breath just nods.

DR. JHAITIN (CONT'D)

After all, I am sure he is aware that I didn't win the nobel peace prize.

Dr Jhaitin pats an old civil-war era antique gun that sits on a shelf in a decorative display holder.

Khatchig has a confused look.

Dr. Jhaitin gives his wife a reassuring nod.

DR. JHAITIN (CONT'D)

Just give us a minute.

Khatchig mouths "thank you".

She looks back at her husband skeptically and then over at Khatchig cynically. She then sighs but acquiesces. She exits the room. We hear Mrs. Jhaitin call away the dog, which is still barking up a storm, from the other room.

MRS. JHAITIN (O.S.)

Euclid! Come!

The dog finally shuts up. We hear it run off to follow MRS. Jhaitin to another part of the house. There is a silence as Khatchig and the professor just stare at each other from across the study.

KHATCHIG

Thank you, Dr. Jhaitin. My name is-

DR. JHAITIN

I know who you are. You're the one who sent me your computer programs.

KHATCHIG

You got them? I didn't know if-

DR. JHAITIN

Of course I got them... all of them!

KHATCHIG

I wasn't sure if-

DR. JHAITIN

I even printed out the programs you sent me. They're right here.

Dr. Jhaitin motions to papers that are on his desk.

KHATCHIG

Well I just wasn't sure... I know my work isn't very well organized, but I-

DR. JHAITIN

It's not very well developed either.

KHATCHIG

Not developed?

DR. JHAITIN

You're also the one that broke the particle accelerator at the university a few years back, aren't you? I knew I recognized the name.

KHATCHIG

That wasn't intentional.

DR. JHAITIN

A lot of people in the physics department were quite upset. It set them back nearly two years.

Khatchig just has a guilty and apologetic look on his face.

DR. JHAITIN (CONT'D)

So what is it that you wanted to discuss that couldn't wait?

KHATCHIG

Well, I wanted to discuss my work.

DR. JHAITIN

That's why you broke into my house? That's why you nearly gave my wife a heart attack? Because of your work?

KHATCHIG

I'm sorry... but I am staying at this hostel and they are going to kick me out, and I have no where else to go... and this work I am doing... I don't think anyone else could appreciate the, the... not without a computer, math, and physics background... and don't you see the implications of what I am getting at?

DR. JHAITIN

What are you talking about?

KHATCHIG

I am talking about my work... those programs.

DR. JHAITIN

What about them?

KHATCHIG

Well, did you look at them? Did you read my notes, my work, my theories?

Khatchig grabs one of his computer program printouts off the desk and shows it to Dr. Jhaitin.

KHATCHIG (CONT'D)

I mean, this could be a whole new direction for science to go in.

DR. JHAITIN

This isn't science. It's speculation.

KHATCHIG

It's evidence! I mean look at this. Are you telling me that time and space emerging out of an even simpler concept is just some sort of parlor trick? ...Just some sort of novelty act that I can impress some people at a party with?!

DR. JHAITIN

(laughing)

What kind of party would you be showing this at?

KHATCHIG

I mean, I am reproduced general and special relativity out of almost nothing. Did you even look at my work?

DR. JHAITIN

(sarcastically)

Great, a model with space, but it has no notion of matter, and unfortunately we live in a universe that has matter... and dark matter, and anti-matter...

KHATCHIG

Matter could just be like tangles in the network, it could be-

DR. JHAITIN

I don't think you understand how science is performed.

KHATCHIG

What?

DR. JHAITIN

I'm serious. You're work totally ignores the scientific method.

KHATCHIG

What are you talking about?

DR. JHAITIN

I am talking about the way science has been performed for millennia. (pause)

You observe phenomena. You come up with a theory to explain the phenomenon. You deduce what some of the implications of this theory arewhat the predictions are. You test your theory against experiments. If the experiments are consistent with what the theory predicts, this lends credence to your theory. If not, you look for a new theory.

KHATCHIG

Well that's the thing. Many things can't be predicted. That's what I was saying. You can't make precise predictions on simple deterministic systems. It's like Godel's incompleteness theorem. There's no simpler way to out-compute the system.

DR. JHAITIN

This isn't-

KHATCHIG

You know what Kurt Godel once said when someone at the Institute for Advanced Study introduce himself as an astrophysicist?

DR. JHAITIN

Enlighten me.

KHATCHIG

Godel told him he didn't believe in the natural sciences. He believe that the nature of reality could be described a priori-without the need for experience or empirical evidence.

DR. JHAITIN

He also starve himself to death because he thought people were trying to poison him.

KHATCHIG

You're going to tell me this is how the world works?

Khatchig points to a complicated integral with lots of greek letters in it that sits on a pad of paper on Dr. Jhaitin's desk.

KHATCHIG (CONT'D)

No, these are just the symbols that humans have come up with to describe the phenomenon. Math is a human construct.

DR. JHAITIN

Some people would argue the contrary and say math is discovered... that it has always existed... from the beginning of time and in every corner of the universe... we are just understanding more and more about it each generation.

KHATCHIG

The real world works like a real object... with bits and pieces interacting... and what emerges... the consequences... those are the physical laws... and we describe it with this language, with symbols we've made up, called mathematics.

DR. JHAITIN

Your model is deterministic. You're going to tell me that there is no such thing as free will?... "

(MORE)

DR. JHAITIN (CONT'D)

it is written?" ... Apparently you're not a "Lawrence of Arabia" fan.

KHATCHIG

But there's no way to know exactly-

DR. JHAITIN

Where is quantum mechanics in your theory? Where's Bell's inequality? Where's? Where is the random probabilistic nature that we can show over and over in experiments?

KHATCHIG

It isn't randomness. It's complexity. Irreducible complexity. Nothing is random. Einstein was right; God doesn't play dice.

DR. JHAITIN
So we should just rewrite thermodynamics?

KHATCHIG

Sure statistics and probabilities may be our best tool at making predictions because the complexity of the system is just so overwhelming that there is no easy way to get at the final answer without just letting it play out... But that doesn't mean these statistical approaches are the fundamental rules that govern the universe.

DR. JHAITIN

It's scientific heresy...

KHATCHIG

So what? So was the notion of the Earth orbiting the sun at one point.

DR. JHAITIN

It's useless. You cannot put a man on the moon with your science. You can't make transistors with your science. If you want to make progress-

Khatchig shakes his head and laughs in disillusionment.

KHATCHIG

You know, I used to look up to you for challenging conventional wisdom... but now that you got your ideas out there you want it all to stay the same.

DR. JHAITIN

My work was building on other peoples' work that came before me. You're looking to rewrite all of science... Advancements are made in little steps.

Mrs. Jhaitin comes back in to the room.

MRS. JHAITIN I am calling the police.

KHATCHIG

Don't bother. I'm out of here.

Khatchig just shakes his head and walks out of the door. Dr. Jhaitin has a sad look of empathy in his eyes.

EXT. DR. JHAITIN'S HOUSE - DAY

Khatchig hangs his head low as he walks out of the front door on the walkway down to the gate. The dog comes from the side yard and walks up to greet him. Dr. Jhaitin comes out of the front door just as Khatchig is opening the gate.

DR. JHAITIN

Wait.

Khatchig turns around. There is hope.

DR. JHAITIN (CONT'D)

You show a lot of promise. You should consider coming back to the university to finish up your degree. If you really want to be taken seriously in the scientific community... If you want to make a contribution, you have to learn the standard model of physics.

Khatchig shakes his head and rolls his eyes.

DR. JHAITIN (CONT'D)

Particle physics is an interesting world.

(MORE)

DR. JHAITIN (CONT'D)

They're building the world's biggest particle accelerator.
Maybe you could help discover a new particle.

KHATCHIG

A new particle?! Did you read anything I sent you, you insidious fuck?

Khatchig let's out a big scream. His brimming with anger and on the verge of tears. He looks around for something to release his anger on. There is a lawn jokey next to the walkway where Khatchig stands. He attempts to push it over but it is heavy. He continues to scream as he pushes the lawn jokey.

There is a close-up of the lawn jockey's emotionless face. The dog is jumping up on Khatchig's leg adding to the tension.

Dr. Jhaitin just stands by the front door watching Khatchig lose it. He has a sad look on his face that shows empathy.

Khatchig eventually musters up enough leverage to slowly tip the lawn jockey over. Immediately after it falls he starts sobbing. He takes off running through the gate.

ACT III

A musical montage evoking sadness and angst begins with a song like "I am waiting" by the Rolling Stones... perhaps a Kurt Vile song.

Khatchig runs like a hysterical person running from a killer, nearly falling over. He eventually stops to rest under a tree. He swings his suitcase around and whacks it against the tree in frustration. The suitcase bursts open and his papers go all over the place. He falls to the ground sobbing. After a moment he starts to gather the papers scattered over the ground as he continues to sob.

FADE TO:

EXT. DECAYING STREET - LATE AFTERNOON/EARLY DUSK

Khatchig is walking down the street. His face is flush red but he is no longer crying. He sees the homeless man across the street wearing his shirt picking through trash and gathering cans in a large plastic bag. The homeless man finds a half eaten sandwich in the trash, sniffs it, and then takes a bite.

Khatchig has a look of disillusionment on his face as he realizes the man is homeless, and not a part of some clandestine network.

As Khatchig stares at the homeless man dumfounded, THE BOY WITH THE FLIP BOOK rides by on a BMX bike. HIS GIRLFRIEND stands on the pegs on the back wheel, hitching a ride. The tires kick up muddy water onto Khatchig. Khatchig looks down at yet another stain on his shirt.

CUT TO:

EXT. DECAYING STREET - NIGHT

Khatchig continues to walk. The FOREIGN OLD MAN is on the other side of the street under the light of a street lamp still looking for his keys. Khatchig looks at him as he walks. He shakes his head and waves his hand at the old man as if to say it's hopeless.

EXT. HOSTEL - NIGHT

Khatchig somberly approaches the hostel.

INT. HOSTEL - NIGHT

The film festival is going on. There are about 25 people, including Mikeal, in the lounge watching the 8mm film that is being projected onto a FILM SCREEN. There is a OLD FLAT TAPE RECORDER which is playing the audio casette track for the film. The film is showing a scene with two brothers on hiking trip looking for something. The dialogue of the 8mm film and the sound of the projector are audible as Khatchig walks in through the door.

8MM BROTHER_1 (0.S.)
Did you just hear something?

8MM BROTHER 2 (O.S.)

No

8MM BROTHER_1 I guess I just imagine it.

8MM NARRATOR (V.O.) But there was something there, something off in the distance.

The 8mm film continues to play in the background. There are new faces sitting at the bar watching the film.

Khatchig stands at the bar next to SERGEY and other travelers who are watching the movie.

KHATCHIG

(to Bartender)

What are those jerks doing?

SERGEY

(to Khatchig)

Shhh

The bartender looks over at the left bunk bed where. There are new travelers sitting on both the top and bottom bunk watching the 8mm film.

BARTENDER

I think JACQUELINE booked your bed.

KHATCHIG

Why would she do that?

The Bartender shrugs to say "I don't know."

KHATCHIG (CONT'D)

She booked LANA's bed as well?

SERGEY

Shhhhhhh

BARTENDER

You mean that girl that was here?

KHATCHIG

Yeah.

BARTENDER

I saw her packing her bags. I think she left earlier today...

KHATCHIG

What do you mean?

BARTENDER

You know, she was going to another town... Which reminds me, MARCELL from 2B left a couple of beers on your tab before he left. He said he knew you.

KHATCHIG

What? Are you joking?

BARTENDER

What do you mean? Why would I make this up?

JACQUELINE approaches Khatchig at the bar.

JACQUELINE

You lied to me. I want you out.

Khatchig knows exactly what she is referring to.

KHATCHIG

OK.

RUUD who stands close by watches a defeated Khatchig.

RUUD

(Dutch accent)

At least let him stay the night. It is late. He can have my bed. I am leaving for the train soon.

Khatchig looks up at RUUD.

RUUD (CONT'D)

(making an excuse)

I have to get back and take care of the apartments. There is work to do.

JACQUELINE sighs and shakes her head in disapproval of the suggestion. Khatchig gets the message that he has overstayed his welcome.

KHATCHIG

Thank you, but I think I better be going.

Khatchig looks completely defeated. RUUD looks concerned. JACQUELINE looks unsure.

Khatchig takes his suitcase off the bar and walks solemnly towards the door. The suitcase which Khatchig carries at his side, opens up on the way to the door, and his papers spill out all over the floor. He stops and looks at them for a second. He looks completely drained. He just drops the suitcase. He is defeated.

INT. STUDY OF NOBEL PRIZE WINNER'S VACATION HOUSE - NIGHT

Dr. Jhaitin is sitting at his desk perusing some of the papers Khatchig has left. He has a confused and contemplative look on his face.

MRS. JHAITIN (O.S.)

Honey, are you coming?

DR. JHAITIN

I'll be there in a second.

EXT. OUTSKIRTS OF DECAYING CITY OUTSIDE HOSTEL - NIGHT

Khatchig is outside of the hostel light by the street lights. He looks around. A gust of wind picks up. Khatchig shivers and pulls his arms inside his short-sleeved shirt making trex arms.

INT. HOSTEL LOUNGE - NIGHT

The film is ending. Mikeal is taking the 8mm reel off the projector. Another traveler puts the needle down on a record. "Chances Are" by Bob Marley, or a similar last-dance kind of song, is played. A short Russian boy asks a tall Chinese girl to dance. She unenthusiastically accepts the offer. They begin to dance.

RUSSIAN BOY

(Russian accent)

You like movie?

She gives an unenthusiastic shrug that says "eh". They continue to slow dance like a awkward couple at a middle school dance.

INT. STUDY OF NOBEL PRIZE WINNER'S HOUSE - NIGHT

Dr. Jhaitin continues to pour over Khatchig's papers that he has left.

MRS. JHAITIN(O.S.)

Dinner is going to get cold.

DR. JHAITIN

Ok, Ok.

Dr. Jhaitin stands up and walks towards the dining room to join her for dinner. Mrs. Jhaitin can tell from the look on his face that he is preoccupied by something.

MRS. JHAITIN

What is it?
DR. Jhaitin
(confused)
No, it's... I don't know.

EXT. OUTSKIRTS OF DECAYING CITY OUTSIDE HOSTEL - NIGHT

The last shot is a long, continuos, static camera shot outside the hostel looking across the street. A gust of wind picks up and it starts to rain. Khatchig looks off screen, down the empty street in both directions. He then looks across the street and sees an old burned-out factory carcass set back in a lot with overgrown weeds, debris, and trash. He crosses the street. The rains starts to come down heavier. He eventually makes his way over to the building in the distance. He huddles against the wall hoping that the overhang will shield him from the rain, but he is still exposed to the elements. He shivers. After a moment or two of being exposed to the elements, he takes off and disappears around the corner of the abandoned factory. The shot lingers on the old factory in the vacant lot.

FADE TO BLACK.