

# Schrödinger's Notebook

Clarissa Ai Ling Lee<sup>1</sup>  
*Duke University*

**Abstract:** The short story is a condensed and modified version of a novel of ideas that will be part of my dissertation. The protagonist, an experimental particle physicist, is sent on a mission to recover a hidden notebook supposedly belonging to Schrödinger (a 'what-if' fictive element) that will reveal how the latter had discovered the way for quantum behaviour to be inserted into the macroscopic world of lived-reality, therefore making probable conditions that are impossible under classical laws. Concepts and ideas within quantum physics are used to explore ethical and philosophical questions situated within a macro-human social rubric to instigate an investigation into the hermeneutics of realism. I hope to demonstrate, via the story, that knowledge production in scientific practices is about the exploration of different permutations of reality, and that play, a form of *ludic* methodology, is ritually performed in scientific work, such as in thought-experiments and 'fictional' modeling to reconstruct multiple *worlds* (extending beyond straightforward simulation).

**Keywords:** simulation, science fiction prototype, theoretical speculations, scientific philosophy, realism, scientism, quantum physics, LHC, knowledge, art

## Introduction

This science fiction prototype intends to demonstrate how quantum reality can possibly operate when its macro-actions are expanded. It is a story that attempts to situate theory within the everyday real, often with bizarre consequences. At the same time, it is also a story about how reality can be shifted and recomposed through technological advancement flowing out of theoretical developments. I want to explore how that which is deemed 'supernormal' can become 'normal' as apprehension (a philosophical term used to represent something beyond pure cognitive comprehension) of nature's laws develops. There are certainly consequences to such a discovery if limits are not imposed, thus connecting back to the question of normalization of states to ensure that the 'reality' as we know it is maintained under natural laws.

### *Explanation of work*

The story develops out of my on-going interest in how science fiction can be a performative platform for thought experiments, theoretical speculations, philosophical what-ifs, and ways of narrating abstract concepts and ideas. A colleague and I had created a semi-automated/quasi-interactive web comic novel on the Large Hadron Collider [11] based on our overlapping interests in consciousness, physical states, and scientific knowledge. In the same semester, I had presented a paper at a conference on

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<sup>1</sup> Corresponding Author: Clarissa Ai Ling Lee, Program in Literature, Duke University, 101 Friedl Building, 1316 Campus Drive, Durham, NC 27708, USA. Email: clarissa.lee@duke.edu

the topic of fictive science modelling [12]. Over the summer of 2010, I was able to visit CERN and conducted fieldwork there, studying the progress of the four different major experiments while combing through their reference library. At the same time, I continued to conduct research into the primary sources in the history of quantum physics. The story here is an encapsulation of my fictive endeavours up to this point. At the same time, I keep a research blog to archive my ideas and work through them, collaboratively if possible, as they develop (some of my musings and thoughts there are worked into the story).

## 1. Story Prototype

### 1.1. *Prolegomena*

A woman wearing a flowing electric-blue jacket-dress walks into that dark room containing a conspicuously large screen. Consoles looking like they have been built out of an organic substance surround the screen. A computer lies in wait in the middle of the room, on standby to wake-up once a stroke is dealt.

She seats herself on a swivel chair before the console, powering-up the already-launched interface, and entering deft strokes to crank up the projector-screen. On the screen is a visual of a cat, grooming herself in a cosy boudoir.

The cat is in a chamber surrounded by cat-toys, a fuzzy rug, and a bountiful supply of cat F&B. Amid the cat-wonderland, a Geiger counter peeks out; at the far corner is a sealed jar.

The woman swiftly types in the commands. All at once, a duplicate image of the cat-in-the-chamber is projected. The second chamber is connected like a Siamese twin to the first. With lightning speed, a drill appears in one of the chambers and punctures the sealed jar before disappearing just as quickly. The woman rotates and flips the two chambers in all directions before 'virtually' dropping a curtain over the latter.

Two Geiger counters stand out prominently above the covered chambers; one ticking away, registering the radioactive material that is released from the punctured jar, the other acting as its shadow.

The woman uses a few shortcut keys to flip to a different window. This window contains four diagrams representing different permutations of an experimental set-up for calculating the probability of the types of spins produced along the x-y-z paths.

The actual statistical outputs are appended to the visuals of each of the charts. All are three-dimensional visualization of random-walk particles. Each variable produced is visualized into histograms and line charts that are juxtaposed onto little boxes that could be zoomed to the side of each apparatus.

Now the woman clicks on the side of one of the toolbars by the window and drags an avatar to a random point within the arrangement. She is pressing her palm onto a pad. A flurry of images, including multiple images of the cat, spins in circles, accelerating rapidly. The atomic clock above the screen shows 2:30pm.

### 1.2. *Schrödinger's Notebook*

Linda wakes with a start when the radio clock does its perky wake-up routine. She squints at the red digits. It is about 8:15am and she is supposed to have a meeting with the rest of the ATLAS experiment group at University M of Kuala Lumpur at 9:30am.

She jumps up, grabs the towel from a rack next to her dressing table and pulls out the clothes she needs for the day (she is usually dressed in a shirt and cargo pants for work). She is in and out of the shower: washed, groomed and dressed in all of 15 minutes. Grabbing the neatly laid piles on her desk and stuffing them as well as her laptop into a backpack, she makes for the kitchen and to a quick breakfast of cereal-and-kefir. As she grabs her things, her Smartphone beeps the colour of blue, alerting her to a message from Nora, her lover and a historian of physics at the same university but at a different campus. Her phone alert system is colour-coded to help her differentiate between her most frequent callers. She will have to read the message after the meeting.

Traffic is clear from the combination of school holidays and a system connected to the GPS of each car that reroutes the drivers if there is even a slight hint of traffic. Separate lanes are built for the buses, taxis and other public modes of transportation that private vehicles are forbidden from using, or risk having their cars towed away. Having one's car towed means having to wait 24 hours before reclaiming one's car. Hidden cameras are everywhere to catch the guilty. Many space-encroaching highways had seen been removed, built at considerable expense during the reign of a previous corrupt regime, thanks to the development of a dematerializer-and-vacuum system that melts away the material and suck them into a drum, all within a day without the need of construction road-blocks that usually brings about the traffic built-up. The highway system that was rebuilt takes up minimal space due to *actual* urban planning.

Linda drives into the compound of a covered parking lot. Like most cars, hers is based on a compact concept that is not only fuel-efficient (most cars now run on methane fuel), but can also be 'folded' to save space. Once properly parked within the perimeters of the ruled lines, she presses on the button of her car key and the car 'folds' up all its extraneous parts not in use, such as the trunk and also parts of the car engine, 'downsizing' the car to two-third of its size. Of course, the more efficient cars tend to be much cheaper but contain fewer frills than a luxury model but the tax savings is incredible.

Walking into her office space, Linda catches sight of a coterie of her more junior postdocs clustering around one of the open spaces where small group discussions are usually held, engross in an animated debate. One of the postdocs, Ai Mei, is holding up *Fizika Unsur*, one of the leading physics journals published in Malaysia. Another postdoc, Raymond, is loudly remonstrating.

"... Equating the reworking of General Relativity into the reality of the MP-Branes as 'catastrophe of the highest order,' and 'the breaking of the natural law by altering reality through tinkering with the degeneracy of the quarks will breed ill for humankind'... and then he goes on to ramble about this mystery notebook belonging to Schrödinger that is rumoured to hold some blueprint for the alteration of certain eigenfunctions that will not only reverse the existing 'real' but could also open portals to a different dimension. This crank claims that Schrödinger apparently found an equation that allows one to break out of the 'normalization' mode of the wave functions... break past the asymptotic distribution of energy levels... build life-changing machines that cure malignant diseases as well as revolutionize the speed of our travel. But Schrödinger apparently hid this notebook with that so-called blueprint because he saw that the negative outcome will outweigh the positive effects, because we are 'playing God' with nature.... I can't believe this crap is even published. I know this guy is famous and used to do good work but can't the editor just diplomatically

turn him down? What is it about former geniuses turning into crackpots...I hope I will not become one of them.”

“You have to be a genius first, Ray.” Raymond glares at Ali who dares to suggest otherwise.

“What’s with the gossiping,” Linda steps swiftly over, “Don’t you know we have a meeting in like less than half-hour? Save this for your lunch break or after-meeting discussion if you must!”

“We were just discussing a letter to the editor sent by this Japanese scientist who claims to have evidence of Schrödinger’s notebook though he is rather elusive when describing that proof. He claims that having the super-LHC run experiments for demonstrating the physical state of string theory will bring about disaster of an unforeseen magnitude. He actually wishes that we would fail to complete the experiment! We just find it hard to believe that an imminent experimental physicist, himself a pioneer of experiments that gave us the knowledge we have today, can even think like this...” explains Ai Mei.

“Well, the world does not operate by his word. We will have a meeting soon so please get all your reports in proper order and meet at the conference room....”

“Hey Linda, Prof Tong just sent me a last minute DM and wants me to pass this on. He has to postpone the meeting till tomorrow morning because he has an emergency meeting today with some big folks over at CERN...” that was Marissa, Prof Tong’s research assistant and an advanced graduate student.

“Thanks, Marissa. Well, you guys are fortunate today but we still have to get back to work. We were informed yesterday that a new set of data will be in by now and since we are working against the clock before that big conference less than three weeks from now, we have no time to waste. I don’t have to remind you about how we need to begin the second layer of analysis by the end of the week, once this month’s data are all in. That is, if you don’t want to work all of weekend again...”

All the postdocs scramble to their cubicles at the threat of another full-day weekend at the office.

Snatching up her mug from her desk, Linda made her way to the pantry to refill the tea she needs to sustain her morning. After making her choice from the pantry’s selection of many flavoured teas, she is about to leave when she catches sight of a cinnamon-skin, attractively built young woman she has never seen before. Linda had not heard her coming in. Her face was turned in the direction of the espresso machine but Linda can just about make out the former’s profile.

“Hi...” Linda ventures hesitantly.

The woman turns quickly. Linda was struck by the woman’s beauty and the luminescent quality of her features.

“Oh, hello.” Her voice has a lilting quality that betrays an accent Linda found familiar yet strange. It’s not unlike the accent of the latter’s half-Irish and half-Chicana paternal grandmother.

“I am Linda. Nice to meet you. Are you new here?” Linda offers her hand.

“I’m Raina, from Brazil. Today’s my first day at work. I am a postdoc with the theoretical physics division,” she replies while delivering a firm handshake.

“Welcome to Malaysia. What specialty are you?”

“I am a phenomenologist, working in condense matter physics. My PI is Prof Raman.”

“Ah yes, I know him. A kind man, generous with his time and knowledge. Where did you graduate?”

"I received my doctorate about two weeks back, in Chicago U, before I had to pack everything and move here. Are you a postdoc here too?"

"Indeed, I am. I came here about one-and-a-half years ago. I'm with the ATLAS program."

"That's great. Well, I hope to see you again soon. I've better get back to my office as I've to meet with Prof Raman in a bit."

"Sure. Take it easy."

Linda is about to leave again when she catches sight of a slip of pink paper lying on the counter next to the coffee machine. Did Raina leave it behind? She could have sworn the paper was not there when she first came in.

Slipping the paper into her pocket with the full intention of locating the new postdoc later, Linda walks out with a full mug when she receives a call from Nora, asking the former if she has had a chance to look at the important document the latter has emailed over.

"...It's not just an original copy of Schrödinger's *Die gegenwärtige Situation in der Quantenmechanik*. Its margins are full of personal annotations, including a little symbolic inscription on the side with a signet. It has been buzzing loudly in the history of science world about how that symbol is a clue to that missing notebook containing a more developed system of his equations within relativistic QM that can unify string theory without breaking the symmetry of the unified forces. I am sure this is of interest to you people with the soon-to-be launched experiment..."

"I don't know about this. I somehow feel that all these gossips about Schrödinger's notebook is like all that discussion over Fermat's lost theorem...pure speculation."

"Don't be too quick to dismiss. Take a quick look at the document I'd sent you. Want to meet for lunch?"

"Originally I would have had to pass, but since our time-consuming, weekly update meeting is now postponed, I've a bit more lee-way. I'll meet you at the Fountain Café?"

"At one? See you then."

Returning to her cubicle, Linda activates her workstation and pulls up the email sent her by Nora. With a small note summarizing what was said in their phone conversation, Linda clicks on the file that opens into a three-dimensional replication of the manuscript, produced with the aid of GIS-influenced visualizing technology. That, together with holographic laser that not only transfers the sight and feel of a three-dimensional object but also enhances faded marks on any object, handwriting included, made the manuscript so real that Linda is tempted to try to touch it.

Scrutinizing the marginalia, Linda finds the inscription that Nora has helpfully highlighted. It looks like five close-knitted epicycles constructed out of a Möbius strip, a series of numbers weaving in-and-out between their interstices. The entire symbol is set within the boundary of a simple isosceles triangle. What is interesting is that symbol was not drawn but impressed with what looks like a red-coloured wax seal. Why is that the case? The marginalia jottings do not seem so much to be a conversation with Schrödinger's text than an attempt at hyper-commentary. However, a line catches her eyes. Someone had written this in French:

*Le signe serait indiquer le direction de connaissance de reel. Suivez de série dans le triangle.*

*(The sign will show the direction of real knowledge. Follow the series in the triangle)*

What is this that Nora has unearthed? She will have to suppress her curiosity until lunchtime, as there is just too much to be done in the next three hours.

Making sure there are no other important work emails requiring her immediate attention, she logs into the common GRID database and opens the data bin their group is charged with. Not only do they have to compare between the raw data and simulated data, they also need to build them into a system demonstrating more coherently the points of connections, which are the points of similarities and dissimilarities between the actual data and the simulations. This program is a prototype built from an algorithm that takes research data inputted and puts them through a series of self-reflexive queries before modelling raw data based on how the researcher/analyst provides input to those queries. Different permutations of the model can be created based on these interactions. A game engine is appropriated to create a series of narratorial multi-paths for a nested series of forking paths; a report in the form of story-telling is generated each time a choice is pursued, contributing to a more coherent system of epistemic strategizing. Data produced through simulations are also put through the same set of queries, though one will have to input these as simulated data, whereby another set of questions relating to the selection criteria will also be included.

Linda and her team, in collaboration with some computer scientists, have developed this program. Now, they need to build a solid database by which they can then demonstrate how the software will read through millions of data in seconds while asking 'clarifying' and 'penetrating' questions of the researchers, on time for unveiling and demonstration to potential funders at one of the most major conferences in their field. This system is supposed to be the answer to the automatisation of data checks, validation and selection, and a resolution to the problem of data selection. The software is supposed to minimise human selection biases (by providing a pop-up box of a list of possible inclusions and exclusions whenever a selection is made), allow every possibility to be considered without having to go through an overly laborious process, and enable every raw datum to be put through a test, including 'junk' data, before they are discarded. It also allows the phenomenologists among the theoreticians to grapple with problems that do not yet have experimental equivalents.

Pre-occupied until nearly noon when she ventures to check her email again, Linda sees another email with an attachment sent to her. On the subject-line is:

**DO NOT DELETE. ATTACHMENT HOLDS THE KEY**

Curious yet tentative, Linda clicks on the email. All emails she receives, including attachments, are subjected to virus scanning based on known and unknown virus codes. If the provenance of the email is unknown, the user will be apprised of the email being delivered to a 'lab' container for further examination and quarantine until found to be safe (though the user can also choose to over-ride that function though no attachments will then be accessible). The contents of the attached document merely read:

**Look beyond the quarks. The answer lies in the strings, numbers and theory. Follow the mark of the five and be delivered. Look again at the numbers of this email address**

There was that symbol again, the exact replica of what she saw before on that manuscript, and a series of numbers attached to the symbol with a picture of a skeleton key printed next to it. She also sees the emblem that looks like an emblem of the Merlion.

Looking up at the sender identity, she can locate no name; just what looks like a serial number and a @ADA.net domain name. No search is able to cast light on this mystery domain name but there is a distinct quality to this email address. It looks

vaguely familiar. Baffled but pushing the thought to the back of her mind, Linda returns to work.

As she wraps up the morning session in preparation for lunch, she remembers that she still has the pink slip of paper in her pocket she has yet to return to Raina.

Logging off and grabbing her keys, she dashes off to the theoretical physics division. Asking a postdoc she knows for Raina's coordinates, she goes to the final cluster of cubicles pointed out to her and sees Raina sitting intently in front of her laptop. Clearing her throat, Linda approaches.

Raina looks up.

"Eh, hi. Good to see you so soon again. What brings you to this monastic part of the world?" It has been a running joke that the theoretical physics division has always been called the 'monastery' since its residents spend their time thinking and contemplating. Interesting that Raina has caught onto the lingo that quickly.

"I think you left this in the pantry just now. I meant to bring it over earlier but it escaped my mind till now so I thought I'll drop it off on my way out to lunch."

Raina's eyebrows arched slightly at the sight of the pink slip.

"It is not mine."

"Oh, sorry. Pro'bly somebody else left it there. Sorry to bother you."

"No bother. You will soon understand."

"What do you...." but Raina is already picking up a call that is just coming in.

Not understanding what Raina meant and being indisposed to ask, Linda decides to just leave for lunch.

### *1.3. Non-Local Entanglement*

Linda enters the Fountain Café, a favourite lunch place for the non- undergraduate segment of the university community; she is struck by how quiet the place is today. It is at the time of a long semester break so some of the faculty members may be away or travelling for research. Linda likes the eclectic décor of the place, with furnishings from around the world that are tastefully and artfully placed. Even the ambient music, quiet and soothing, represents a world collection of music that streams directly from the music database of the university's music library.

Other than two people seated at a table to the far corner of the room, the place is surprisingly empty, even for a university on break. One of the two customers gets up and leaves just as Linda enters. Nora has not shown up yet. As Linda sits on her favourite spot, checking her cellphone-cum-PDA for messages and list of tasks to do for the afternoon, she senses someone before her. Thinking it is Nora, she looks up expectantly, only to be surprised at finding the only customer left at the place standing in front of her. She has seen this person before, a well-groomed woman looking to be in her mid-forties, wearing a suit, skirt and a pair of court shoes with no make-up except for pearl-coloured lipstick. Linda suddenly remembers her as the vice-provost of academics at the university. They have never really spoken since Linda has nothing to do with the academic affairs department, not being a student or administrative faculty there. Why is she here?

"Hello, Salmiya. You remember me?" She lightly touches Linda on her head.

Before Linda can react, the middle-aged woman morphs into a much younger looking woman in a flowing electric-blue gown and long, raven dark hair. The backdrop of the café disappears and Linda finds herself seated in a room with low lighting and an array of consoles. The room is padded with light-grey, smooth yet hard-

ribbed material. It didn't take long for Linda to realize that she is seated in no ordinary chair, but is wired onto a chamber with light pads velcroed onto the different points of her temple, arms and thighs. She finds herself wearing a grey-coloured bodysuit. There is a small machine that looks like an oversized multimeter with a sophisticated looking oscilloscope attached right next to her, and the wires connecting to her pads all come out of that machine.

"Who are you, where am I?"

"I am Anita, your handler but also your lieutenant. Looks like the capsule we administered you has successfully altered your conscious reality completely. The only time you have access to your 'actual' reality is when you sleep. The good news is, you are less likely to slip-up. The only problem is how we can continue to communicate or send messages to you without freaking you out. Just so that I can talk to you face-to-face without you thinking me a lunatic, I had to activate a tiny dosage of a serum here that pumps directly into your nervous system just so I can bring you back momentarily. Unfortunately, I can't keep doing this since that will be dangerous to you and us. As you will return to the other reality very soon, we have to hurry. I have no time to apprise you of your true identity except to tell you that you were put in that reality because you asked to be on that mission to recover the lost Schrödinger notebook. I want you to pay attention to what is in that pink slip of paper and also every reference and lead that brings you closer to the quest. I have asked the person you know as Raina to leave the slip where you will find it but to be discrete and in no way attempt to contact you with any details of our mission. Nora will bring you a document that you must compare to the slip of paper. You are to break..."

"I am beginning to think you a lunatic. I'm just an ordinary physicist," the words came out strangely strong and insistent, "I think you've got me mixed-up with someone else."

"I did not want to use this experiment on you before we have completed phase two of alpha testing but as time is running short, we had no choice. You insisted we continue with this when you were Salmiya. Yes, you are a physicist in our world as in your current one, but you are also a code-breaker, of the highest order. We will have to find ways to help you access the other part of your true self even as you continue to be submerged in the other reality. The reality you have now is real, but not your reality. It was a reality of thirty years ago. Some of the memories you have that you think is yours belong to your mother. You will understand more when the time comes. Right now, we need you to decrypt the number series, using the clues that Nora will bring to you. Pay strict attention to the margins."

"If I am who you say I am, who then is Nora. Why is she so important?"

"She is from your mother's past."

"My mother was a lesbian?"

"I am not at liberty to discuss this with you and I cannot keep you here much longer. We can plant some memories but we cannot change the intrinsic make-up of your real self. However, we need to solve the puzzle and find the location of the place where the notebook is kept."

"Well, if I belong to a past, then I am sure we already know where the notebook is?"

"You do not quite belong to a past. It's not that straightforward. We did not do any time warping or 'time-travel' in the conventional sense, if that's what you are thinking. It has to do with quantum timeline and dark matter history. You are in a reconstructed life that is as real as any you have encountered in your past, but it's also a virtual real."

You will understand more in time. I wanted to tell you to pay attention to all the strange messages that you seemingly get, and to all the seeming absurd events around you, especially the most inexplicable ones, as they hold the clues to our search,” Anita continues.

“Ok, so I am to find the location of the book in the past and then get jacked back to the future to look for it in the ‘real world’?”

“No, you will have to record all that you see in your real and then transmit the information back here. You will know exactly what to do once you find the notebook. The book no longer exists in our ‘dimension’. It has been lost or destroyed. But we know that it has surfaced once in the timeline you are in and that it must be recovered there.”

“Ok, this is not making any sense. How can I recover something if I am living in a ‘reconstructed’ world, whatever you call it.”

“You will. You are fading out and we cannot prolong your absence from the other world. It may be sometime before we talk again, at least as far as you are concerned, since our timelines do not work in strict parallels. We will be in touch.”

#### *1.4. New Physics*

She has a sensation of simultaneously falling and floating.

“Linda, Linda...”

It is Nora, seated in front of her, holding a red metallic file.

“Are you Nora?” Linda demanded, still in a slight daze. She sees a glass of iced lemon tea perspiring in front of her. When did she order that?

“Of course I am Nora. Are you alright? You look like you were in a trance just now when I came by and I wasn’t late. Were you up all of last night again?”

“I slept rather late, yes. Anyway...sorry. I must be feeling a little off today.”

“Do you want to take the afternoon off? I’ve no meetings today so I’ll be working from home. You can come over too if you like and chill out by my new indoor pond-garden.”

“You finally got it installed?”

“Yeah, yesterday afternoon. It made a small dent on my finances but well worth it. Besides, I deserve it after that good news.” Nora is recently offered a full-time faculty position at the same department she is currently with, so it will be a seamless move from a research fellow to becoming a lecturer two months from now.

“I can come by later after work. I have to return in about an hour, as we have to complete this week’s phase to meet the multiple deadlines, always an issue with such an ambitious project. The conference is in less than three weeks so everything has to be up and running as best as possible otherwise it would be hard to get the funding to move on to the next phase. It is easier to do the major testing from the office than through remote logons due to all the security issues.”

“Sure, come by after 7 pm. I am going to kickboxing from five-thirty for about an hour so I’ll be home by sevenish.”

“Right. So, what is it that you wanted to show me?”

“This is the exact facsimile of the manuscript image I’d sent you earlier today, but there are more pages here with writings on the margins that were not in the file I sent you. We are still not sure if Schrödinger wrote this himself or if someone else did, though my money is on the latter, because the handwriting is a little different. Also, the writings in the margins are not so much comments on the text as enigmatic references

to something external; they look like instructions of some kind. However, keywords from the original text are used. When the keywords are used, the writing switches to German, otherwise, they are in a mixture of French and English.” Nora hands over the file.

“Where is the original?” Linda asks eagerly as she unfolds the metallic protective folder to unveil a musty-looking manuscript exactly like the original down to the smell of the paper, reproduction technology at its best.

“In Berlin, at the Max Planck Institute of the History of Science. They refuse to let it leave their vicinity but are willing to provide reproductions to any researcher asking for one. This is one of the two copies we have. I can’t give this to you since it belongs to the department but I can make a copy for you, though it will not be as beautiful as this one. But you know, such level of reproduction is expensive.”

“Yeah. Just send me photographic prints of this. But tell me, what is so special about this manuscript that got you so excited?”

“The handwriting on the margins was forensically analyzed; it was found that the ink was made from a substance found in 1930s ink, the nib of the pen used was from a make from around the same period (which was no longer sold by the mid 1940s) and the grammar is definitely from before the reform in the 1980s but after the 19<sup>th</sup> century. Taking that, together with what is written, it becomes both curious and amazing. The physics is not from Schrödinger’s era, at least not the Schrödinger that we know. It is more like 21<sup>st</sup> century physics. Our century, but not like what we have seen before either.”

“How do you know it’s not forged?”

“If it’s forged, the forger is going through incredible lengths and expense because the machine shows that this is not some manuscript forcibly aged. The forger would need access to the sort of technology that only very few people can have access to pull off such a feat. All those with access can be easily tracked. What can he/she gain from such an act of forgery? This person has to be a super genius to spend all that time thinking up the science since the writings here are based on pretty solid factual reasoning, with hyper-imaginative extensions. Moreover, there are other parts of the science here that supposedly point to solutions to GUT and string theory. Really, in the early to mid- twentieth century? That’s almost a century before our year of 2045 and we have only seen the tip of what this writer or writers’ referring to.”

“Well, we can’t be sure what the objective is until I can examine this document further. I may not have much time to give it more than a quick run through, for now. I’m working a 14-hour day for the past few weeks. I need a bit of a break tonight before we proceed to the next phase beginning this Friday. It’s already Tuesday.”

“I can’t say I understand all the physics that is going on here, which is why I am hoping you can help. The reference to that signet is really strange. I think it’s the key to this mystery. Anyway, it’s fifteen after the hour and I know you have to get back soon. Shall we order first?”

### *1.5. The Cat Returns*

Back in the office, Linda is recipient of another email, from the same domain name but with different number series preceding it. This time, the email merely asks her to click on a link to a website. Linda is certain that the combination of stress and uncertainty has led to that ‘psychotic’ break at lunchtime. Once the conference is over, she needs a major break and should also begin seriously considering applications for

faculty positions elsewhere if it does not seem likely that she will be hired into the current department, something she is reluctant to do given her investment here. She has to speak to her mentor about her future plans. She does not want to move anywhere far, disrupting the perfect relationship she is having with Nora and her productive work at the department, just because she has to take another position elsewhere. She has spent part of her childhood and much of her early adult years, save for some time abroad in Europe, at the United States when her parents migrated there because her father took up a CTO position at the new Silicon Valley firm in North Carolina. She wants to spend more time in her former homeland now, to explore her heritage and family history. No other university in Malaysia, at this time, has the precise set-up for her to continue her work.

The website opens up into a research institute called Solvay Institute of Future Understanding. She has never heard of such an institute. She hopes it is not some Trojan page but the page looks legitimate, with a legitimate address that she is able to quickly look up through a satellite geo-coordinate search engine. Apparently, this institute for future studies is located not in Solvay, despite its name, but some place at a state north of Kuala Lumpur.

“What on earth is an institute named after a Polish town doing in that backwater town like Ipoh?” A paragraph at the bottom of the page caught her eye as she scans it

***The story of how quantum reality moves from the micro to the macroscopic world we inhabit is the subject of our research. We have an extensive archive on this, including a few primary materials we were able to obtain. If you are a researcher, a scientist, a historian or a futurist who is interested in what we do and would like to be part of our collaboration, please contact our research liaison officer, Dr Kavinsky, with a cover letter describing your background, attaching your Q-code.***

The Q-code contains all the updated data of a person who has entered professional life. Each person has one the moment he/she is gainfully employed for the first time, regardless of the nature of the appointment (usually of a legitimate nature). It functions as a sort of a CV while also allowing the recipient to conduct background checks on the owner of the Q-code, yet disallowing access to more personalized data such as medical, financial and other highly personal information (which includes any brushes with the law) without an added layer of security permission that has to be obtained from the owner of the Q-code.

On the top menu page, Linda clicks on “Research” and comes to a page with many manuscripts and also colourful diagrams not unlike the kind she and her colleagues produce in their work. Apparently this institute has links with several other scientific research institutes around the world, as well as some research archives with the most comprehensive primary scientific materials in the world. Literally, the materials include instruments and the results of experimentations, not just records, reports or printed productions. Right at the bottom of the page, she reads:

The Untold Story of Schrödinger’s Cat

It is 2:31pm

“Linda!”

It is Raju, one of the junior postdocs, standing by the side of her cubicle with anxiety written over his furrowed brows. She swivels around to face him.

“What’s the matter, Raju?”

## 2. Summary and Reflections

The story stems from grappling with the idea behind technological progress and how it is not only about coming up with the most sophisticated tool to do something different or better, but also to understand the inter and intra-relationship between these tools, the users, and the non-users who may be impacted by them. Many of the products built today are becoming increasingly cheaper but have very short life spans, obviously so that their manufacturers can accrue profits through continuous sales. At the same time, many of these products are not 'ergonomic' as they do not always complement or fit into the lifestyles of an increasingly urbanized generation leading lives impacted by inflation, climate change, overpopulation, informational clutter (spam included), under-production of healthy foods, and environmental issues. Hence, the second section of the story above is less about a desire for utopia in an alternate world but more of a plausible suggestion of how technological and scientific developments, together with good governance, can bring about conditions that may not be perfect but can still lead to the improvement of one's standard of living. Even as one has to wrestle with the circumstances affecting the 'everyday Joe', most of whom are far-removed from the exclusive world of cutting-edge developments, we see advances in the fields of sciences that are not only about answering fundamental questions we have about the teleology of our universe, but also the development of apparatuses that can be utilized in the fields of medicine, electronics and food technology.

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