## Title

*Kronos*

## Objectives

* Appeal to 20-30 year olds with a magic tied to realism.
* 50000 words
* Create a “Universe” like LOTR, HP, Star Trek,
* Explain “Gods”
* Should have a major twist
* Tell my story a bit

## Symbols

## Metaphors

## Topics

* Religion
* Existance
* Physics
* Technology

## Themes

* Humility
* Life is hard
* Technology is intertwined with humanity

## Characters

### Main Character

#### Michael

Other names (Emmanuel, Aldo, Ezechiel, Luca)

Michael is the main character

#### Traits

#### Family

Father – “

### Romance #2 (main)

#### Belle

(Natalie) Michael’s future wife,

#### Traits

* Energetic
* Kind
* Smart (Law/Computer)

#### Family

Father – “

### Romance #1

#### Raphaela

(Melissa)

#### Traits

* Smart
* Controlling
* Serious
* German Heritage speaks with slight german accent

#### Family

Father – “

Interested in med school. Raised by conservative strict parents. Ambitious, willing to throw people under the bus, in it to win it attitude.

### Best Friend

#### Enzo (Dominic)

(Gio)

### The Tutor

#### Cato, Favian

## Synopsis

Michael, a brilliant bashful student, discovers the secrets of the religion and universe and the group trying to protect it. A strange man becomes his mentor and is murdered. Michael begins his quest to avenge him, uncovering his own potential and deciding whether or not to reveal the truths he learned to an already crumbling society.

## Summary

## Outline

1. Michael in school
   1. Introduce family
   2. Introduce Best friend
   3. Introduce crush
   4. Introduce

Main Building

Class Building

Class Building

River

Nuclear research

Agriculture area

Agriculture building

Willow park

Willow park

Cafe

Soccer Field / volleyball / basketball

Gym/pool

Dockyard

**Scratchpad**

* Universe has to have rules that set the statistics of quantum mechanics in place. Ie. What governs uncertainty principle?
  + This is “5th” force field (actually 6th) or neutral force (see zero point energy). Explains matter dominance. Is actually THE fundamental force, all other forces originate from it
  + Fundamentally based on binary (ie true false)
  + “develops” time.
    - This is why going backwards in time creates new universe
    - ZPE is like moldable clay that hardens after the present
  + Explains Higgs Boson’s light mass
  + Universe is a consequence of mathematical “truth”
* Yet another force field for “existence” or observational force field or life force (humans can use like mitcloriates from star wars)
  + Responsibel for ghosts
  + Shaped by organization of zpe
  + Control of this forces gives control of universe because of way it interacts with neutral force
* Why no aliens?
  + Aliens came to earth and gave people means to control this force
  + These people became gods (angels receive lesser “weapons”)
* Wands: voice commanded weapons haha
* Knights Templar: were searching for the answers about the aliens
* Universe still has some magic
* Prologue in Tyre after Reconquest of Acre by Richard I 1191
  + Robert de Sable is knight grand master

**Articles**

1. Mills, M. J., O. B. Toon, J. Lee‐Taylor, and A. Robock (2014), Multidecadal global cooling and unprecedented ozone loss following a regional nuclear conflict, *Earth's Future, 2*, doi:10.1002/2013EF000205.

## Forward

This book uses significant scientific language and technical references. They are there for to provide context and add plausibility to the plot line while hopefully also intriguing the reader. However, I have avoided burdening the reader with details on many of these topics, save what is truly relevant to the story. Where possible, I have left footnotes with either personal notes, or references to articles and scientific citations where the reader can learn more.

The major purpose of this book is to make the reader expand their minds of what is possible: to blend fantasy with reality. I hope this encourage the reader to view life differently which far more bewilderment and appreciation.

The other purpose of this book is far more personal, a recount of what was, a wonder of what could be, and an escape to what is not.

## Prologue

Sand whipped around the stone preface the young acolyte was sheltered behind. Clutching the satchel close to his chest, he wondered how long it would be until they would find him. Though he sensed tears form, he held them back as he reflected on his circumstances. He was a long way from home and he missed the running streams and cool air that would flow from the forests. He especially missed the small market in the village where he would buy fresh fish and bread. Now his stomach hadn’t been filled in days and his mouth was parched. If they didn’t kill him, he would certainly die from the elements soon enough.

He covered his mouth with the folds of his robes and once the winds paused for a bit, left the safety of the small rock formation and proceeded to what he could only hope was the direction of a small town. Having seen some small sandstone structures while on top of a hill earlier, he had been heading that way since morning. He hoped the small town would provide some temporary shelter to rest and help disguise him.

The sun was getting lower and the air began to cool. To the acolyte’s relief the faint glow of fires and smoke was not far away. Just as the he stumbled over the top of the next hill, the village came into view. A few huts and tents strewn about a bazaar, only a handful of traders and craftsmen lived here, but he could scarcely make out a small building that looked like it might be an inn. He made his way down the hill, climbing over rocks and small bushes. The shrubs would cut his ankles and the rocks would jab his feet but he was too weary to register the pain, focused entirely on making it to town.

He paused for a moment just outside of town peering at a small makeshift wayside shrine. A thought crossed his mind, and he made his way to it. Upon reaching it, he rested his satchel in front of the crude clay Virgin Mary and knelt in prayer. He ask for her blessing and protection and for a safe passage to Tyre. Too tired, too hungry and too thirsty to do a proper prayer, the acolyte left for the hostelry.

The innkeeper looked at him strangely as he tried to request a room in Italian. He wasn’t certain if it was his inability to understand him or his appearance. After some time, the inn keeper held out his hand spoke in broken Italian.

“Room upstairs 1 silver”

The acolyte sighed in relief and gratefully paid the man. He headed upstairs to his room and he collapsed on the straw bed and closed the curtain to his little room.

The smell of candles wafted through the curtains as the night grew later and cooler. Just as the acolyte was drifting to sleep, the noise of distant shouting awoke him. The acolyte peered out the window, and could see a group of horses and soldiers gathered. He couldn’t make out how many there were but their white garments and red crosses were unmistakable. The Knights Templar had arrived.

The acolyte’s pulse quickened. He quickly gathered his things and pulled the curtain aside. He could hear the horses approaching the hostelry. Any moment now they would question the inn keeper.

The ground beneath his window was sandy and soft. The acolyte briefly questioned whether to run or hide when he heard the Knights enter downstairs. He heard them ask the inn keeper if he had any guests tonight. Sensing the urgency, the acolyte made his decision. He lept. Just as he landed, the other Knights still gathered by the bazaar took notice of him and climbed on their horses. The acolyte clumsily collected himself and started running.

He knew this was a futile effort and he would likely not survive this encounter like he did his last. They would not let him leave their sight this time. Darting between tents, houses and bushes the acolyte attempted to evade the Knights’ line of sight. But the sound of hooves grew closer and as he came to the town’s edge his options for cover grew slimmer. His lungs hurt, and despite his commands his legs would not go faster.

A jolt to the back of his head toppled him forward. Spitting out sand, he rolled on his back to see the mounted Knight towering above him. He dismounted, his chained armor rattling as the weight of it fell taunt. He drew out his sword and held it to the acolytes chest.

“Don’t make me use this.” He spoke calmly in Italian. “Don’t get up. Are the artifacts contained in the bag you carry?”

“Yes.” The acolyte paused, then pleaded, “will you spare my life if I surrender them to you?”

The Knight snatched the satchel. “Unfortunately not. But it will be painless. I do not know not what this bag possesses and I would gamble you do not, but the Grandmaster Robert de Sable has assured us that its contents threaten all of humanity and its secrecy must be guaranteed. And I intend to carry out his orders.”

The acolyte’s heart sunk as the Knight pulled something out of his pack he was carrying… a scepter maybe? He closed his eyes as he prepared for death. He felt the cold metal touch his forehead and his eyes began to well in fear. But for a moment, he let out a small smile for he realized although he would lose his life, not all was lost.

## Chapter 1 “Peace”

War was a distant thought here. Michael watched the early morning sun creep over the canopies of the dark forests which covered the distant hills. As the earth in the valley warmed, the thick fog began lifting and the chill in the air subsided slightly. Michael actually preferred the cooler air as he walked his way to classes and was mildly annoyed that today would likely end up being another unbearably hot day. His pace quickened.

The road leading to his school followed a small river which formed the valley where his small town was located. It was very peaceful in the morning, cars rarely passed and only the sound of the water running and some coos of doves broke the silence. It was a great time to think. Michael was an intellectual and at 20 he was already wrapping up his undergraduate degree in Physics at the Scientific Institute of Rosenheim, or more colloquially referred to as “The Institute”. He developed a particular interest in fusion research and planned on getting his Masters and PhD at the Institute as well. The Institute was a small school, with only a few thousand students, but it was incredibly prestigious and well-funded. It accepted the best students from around the world. Truthfully, Michael felt he didn’t deserve his acceptance, and he did not always score as well as his peers.

Michael’s academic ambitions did not always serve him well. He struggled to form meaningful friendships throughout grade school and was hoping that he would have a better experience in university. He had learned to become more social in grade school much like his studies: quietly observing the way the other students interacted for years. However, practice was another matter. Being significantly younger than the other students and being too much of an intellectual put him at a disadvantage with the other kids, most just couldn’t relate. Of course, it also made dating fairly difficult.

Michael was not unattractive, however. He was tall, 6’3”, masculine with naturally broad shoulders, slim waist and muscular legs. He was always physically active, and began working out a couple years prior to further improve his appearance. He had dark wavy hair, a broad eastern European jaw, and surprisingly bright golden eyes. He was not lacking in confidence either, leaning more to the side of being slightly brash. He had met a couple girls he liked and there had been a couple kisses in his past, but any chemistry that was there fizzled out quick after discovering the intensity of Michael’s personality.

Years of relative solitude however did teach Michael to appreciate time to himself. He intentionally signed up for early classes to enjoy the peaceful morning walks. He could ponder about his research, day dream about traveling, or plan out his day. He was thinking about what he was going to eat for lunch when someone slapped him on his back.

“Yo, did you hear about Dominic?” blurted a voice with a slight accent from behind him. It was Enzo, an older Italian boy, whom Michael considered perhaps his only friend at school. Enzo was living in the same housing complex as Michael and they spent some Friday nights going out downtown. He was of average height, but was quite built which made the size difference not as apparent.

“Nope, what happened?” Michael replied.

“He went out last night and went home with Sandra Vickers.”

“I thought Dominic had a girlfriend.”

“He did! Doubt he will when she hears.”

Michael thought it was odd, Sandra was pretty timid and he thought Dominic was pretty infatuated with his new girlfriend.

They both pressed their palms to the clear pad at the turnstile gates which served as the student’s main entrance to the courtyard. Upon accepting their handprints, the pad glowed green and a number pad appeared. They entered their pin, unlocking the gates which opened directly into the courtyard. A young armed security guard watched as they passed through.

The courtyard was large and beautifully landscaped. A road leading up the main building was divided by a rocky pool lined by willow trees and flowers and a path. The pool flowed into a large fountain in front of the main building where the road turned around. The main building is primarily administration. It is 5 stories tall and built in the late Baroque style with a large dome. There were two other large buildings, one on either side of the long pool. They were both 4 stories tall and in contrast built in a modern style with large glass panes, steel beams and white marble and both had gardens on top with some solar panels. They housed the primary classrooms and laboratories. In addition to the main academic buildings, there were two other complexes. One was a series of small building some with a barn like appendage where the agricultural and biology students held their classes. The other, a large bulky concrete dome and nearby facilities close to the river housed the physics research facility, or “the Cauldron” as it was more commonly known.

The whole complex was surrounded by a tall stone wall and the only way in or out was through the main gate or the dockyard on the river. The security was necessary as the university had many secret research projects, especially in the Cauldron. In fact, the part of the physics facility above ground was primarily just the security entrance, the vast majority of the building was underground.

The sun felt warm on Michael’s face, even the shade the tall willow trees provided couldn’t protect him from the strong August sun. It didn’t help that the school had a fairly strict dress code. There was no uniform but men had to wear at least a button down and long dress pants; women had to wear business casual as well. Michael didn’t enjoy the formal atmosphere, but had come accustomed to it and appreciated that style was less relevant for social acceptance.

Passing through the large glass doors into one of the classroom buildings, Michael was greeted by a cold blast of air conditioning, instantly feeling relief and quickly drying the small beads of sweat forming on his temples. Enzo was pacing alongside him, slightly winded trying to keep up with Michael’s long strides.

“So, I have this awesome new app idea, let’s get a beer at the Biergarden after class,” said Enzo excitedly.

Enzo was an entrepreneur at heart, he approached Michael with new ideas that were going to make him rich on a weekly basis. Michael always thought Enzo’s ambitions were little more than hopeless dreams, offering little more than skepticism in return but Enzo’s enthusiasm and tenacity amused him and he was careful not to be too discouraging. Enzo’s interest in making money wasn’t too surprising though. His family was very wealthy and he lived a comfortable, perhaps slightly spoiled lifestyle. Likewise, he had high expectations for himself and living at the university on a budget frustrated him.

“As much as I want to start a new app with you I just don’t think I’ll have time. This semester is going to be rough.” Michael said, trying not to roll his eyes, but grinned a little.

“Michael, you gotta let go a little, relax, gotta make time for a beer with friends.”

Enzo was nearly 2 years older than Michael, and often Michael respected Enzo’s perspective on life, which provided a sometimes sharp contrast to his own. This was an instance where Michael reluctantly admitted Enzo was right.

“Alright, I’ll come over after I hit chest.”

They split up. Michael attended his lectures until lunch time, never taking notes. He mostly attended because he was required to, not because he needed to, instead, learning far more from his own studies. Other than being required to attend class, it was nice to be around his peers, in particular a pretty blonde girl who attended his inorganic chemistry class. Ironically, he was not going to take the class, as it wasn’t required by his degree and was even considering dropping it after the first week until he saw her sitting there. He didn’t know her name, but she seemed quite different from Michael, sitting in front with a notebook furiously taking notes rather than the back corner on a laptop browsing the internet. He often considering sitting in front just to be able to see her better, but the prospect of actually having to pay attention dissuaded him. He was just waiting for the right moment to approach her and at least find out her name. However, it would not be today as she hurried out of the classroom with her group of friends long before Michael could even consider making a move.

Michael made his way to the café. He was ravished by lunchtime and was excited to get a decent meal. The Institute included some meals for the students but they had a point system. Healthier options actually costed less points to encourage students to eat well. If you accumulated a certain amount of points at the end of the year you could actually enter them into raffles for prizes, and you could earn extra points by logging time in the campus fitness center. It was for the latter reason Michael always had plenty of points and sometimes allowed himself a treat. Today there was a cheesecake that caught his eye and he almost put it on his tray but grit his teeth and put it back. Instead, the agricultural department had their lab-grown meat on the menu again and Michael was too curious to pass on it. Michael also added some vegetable side dishes to his tray. Each plate had a pattern on it, and as Michael passed through the gate to the eating area, the overhead camera scanned the plates and his face and automatically withdrew points from his account.

Michael sat by himself by the window. He preferred to sit outside but he did not dare leave the air conditioned room. This was a decent compromise. Michael was devouring his meat, which actually tasted surprisingly good for being not real… when a somewhat loud female voice caught his attention.

“Hey there, are you interested in the boat race for the pre-med club?” a tall dirty blonde girl said. Michael wasn’t interested, but that girl from his class stood behind her with a folder and appeared a lot shorter next to this girl who was talking.

“I haven’t heard of it till now, what day?”

“Tomorrow, 11am, we’ll grill out after. It’s just a coin to enter, winner gets a coupon”

“Sounds good, I’ll go.”

“Great, sign up here.”

Michael wrote in his name and id on the sheet of paper she was holding.

“Thanks! See you there” She smiled and the group of girls left. Michael continued his meal, watching the news on the large screen in the center of the dining hall. He wasn’t really paying attention, but he casually watched the Reporter talking about this group shelling this other group in the Middle East. It all seemed so repetitive and foreign, he barely cared.

## Chapter 2 “Einstein’s Blessing and Curse”

Michael, now done with classes for the day, headed out to the Cauldrons. Ordinarily, he would have hit the gym before working on his research, but he wanted to attend the research test tonight and he wanted to get there early.

The building wasn’t particularly pretty like the rest of the complex, with the predominate feature being a large windowless concrete dome. Michael knew, however, that it was necessarily so. In fact, the dome was not for decoration but for nuclear containment. Most people knew of the existence of a nuclear reactor within the Cauldrons, but Michael knew it housed far more than that. Firstly, there were actually two fission reactors, a Thorium Molten Salt Reactor and a Gaseous Core Reactor with Magentohydrodynamic Generator. There is also a prototype fusion reactor. Even more interesting to Michael was the effort to hybridize designs, trying to blend the best of fission and fusion reactors. In addition to the larger industrial research, supporting academic projects also existed, like a particle accelerator, space environment, and quantum computer. There were many other research programs at the Institute that also came with a large price tag, but the amount of funding for the Cauldron rivaled the GDP of small countries.

Michael passed through the large glass doors into the first security hall, where he swiped his access badge at the turnstile once a military guard waved him through. At the end of the hallway was a bag xray machine and millimeter wave scanner much like an airport. At the end of the hallway was a handprint scanner, much like the entrance to the main gate, which opened the 3cm lead shielded steel doors, each weighing almost 4000kg.

The following hallway was mostly offices for professors and research scientists and small computer labs, one of which was Michaels destination. At the end of the hallway was a large conference room and elevators and stairwells to the lower floors. Michael’s fusion research labs were down that way, but he found himself only travelling down there occasionally, spending more of his time at his desk in the computer lab. The Institute provided him with his own semi private desk with a computer. It was no ordinary desktop computer, but a fairly powerful workstation. 256 Gb of RAM, 4 Quad-Core 2.2GHz CPU’s, 2 x 1TB SSD in RAID 0 configuration to perform some of the complex computations Michael was tasked to write. The lab also had an even more powerful network computer that the students could share time with. There was also the supercomputing lab which had the super computer and quantum computer but those were dedicated to special projects.

The screens lit up and filled the otherwise dark room with a blue glow. Michael’s Java code appeared on screen and as usual he stared at it for a moment trying to remember what he was doing just the day before. This particular segment of code tried to capture bremsstrahlung losses and subsequent current and local magnetic field changes due to coulomb collisions in the boundary of the swirl. It’s a mouthful, but it contributes to inefficiencies involved in keeping the reaction going.

He was alone in the lab, which was not terribly unusual, but typically Dominic was in as well. Michael thought he might be in trouble with his girlfriend. He wondered if he would be there for the fusion test run that night.

Tonight’s test was going to be exciting, a full scale test of the fusion chamber with the fission breeder. Some government officials even would be in attendance. Supposedly this test would demonstrate a 7 times return on input power for Deuterium-Deuterium reactions. This method would reduce the need to use lithium which was already in short supply and is more conducive to hybrid fission-fusion designs. If successful, the next steps would be to extract power through a magneto hydrodynamic generator and steam turbine in a combined cycle.

Getting anxious for the test, Michael briefly distracted himself by checking his social media apps. Perhaps he had hoped to find more, but he knew that generally he got little gratification from the apps.