

**Riley Towers**, Chapter 3: “Wednesday, September 9<sup>th</sup>”

“... I just can't believe that bitch ... yeah ... no ... uh ... I don't know ... she's totally ... you know ... a bitch ... no ... no ... I haven't heard from Tom since last week ... huh ... maybe ... sure, in my lifetime ... hey, I'm at the ground floor and have to go.”

Tess was on her phone chatting with a co-worker and completely ignored Jack Vance getting on the elevator with his bike; she was in a hurry, so she didn't notice it was the 3<sup>rd</sup> floor – Jack's floor.

“Are you sure you want to get off here?”, Jack was very polite and he could tell Tess was distracted.

“Wah, huh? ... oh ... shit Trish ... I'll talk to you later ...”, Tess slipped her phone into her purse and Jack held the elevator open so Tess could step back on. She looked embarrassed, but Jack thought the red in her cheeks was fetching – Jack was great at “being attracted to women”, just not that good at acting on it.

“Thanks ... I can't believe I did that.”

“What?”, Jack knew what.

“Oh, you know, getting off on the wrong floor.”

“It's cool ... it's Wednesday ... nobody knows where they're going on Wednesday.”

“HA!”, Tess smiled large, “That's so true ... well ... I hope you have a great day ... be sure to wear your helmet man!”, and Tess left it at that, scurrying to her car in the parking lot.

Jack rolled his bike out into the lobby, then to the sidewalk, and began his relatively short bike ride to work.

Jack Vance loved the ride; it was a small allotment of peace each day in an otherwise crazy, busy, life. His ride to work usually set the tone for the day, the tempo.

Jack was 34 years old, single, and a software engineer.

Jack graduated from MIT, early, with a degree in Physics – with special emphasis on quantum computing and applied statistical mechanics. His advisors all wanted him to “go further”, because they saw in him the next Neil DeGrasse Tyson<sup>1</sup> or some other contrived cliché. Jack didn't want to be anyone other than Jack, and he didn't particularly like the condescending, patronizing, tones implicit in their “hopes for him” bullshit. Yes, Jack was/is African-American; and no, Jack didn't see himself as “black”. Jack saw himself as a geek, a bit shy, not bad looking and not particularly handsome either. He

1 Neil DeGrasse Tyson is an African-American astronomer famous for working to remove Pluto from the list of planets that orbit the Sun. Many have not forgiven him for this ... it is a wonder he is still alive.

was neither fat nor skinny and as close to “average”, in most aesthetic categories, as such things can be ... or people can be. Jack might have been “black-jack” to others, but when he looked in the mirror he just saw some dude ... wandering the roads of life ... and not as sure of himself as others perceived him to be.

Jack loved puzzles ...

Jack played chess on Saturday mornings - at the nearby community center; he mentored a couple of kids and more often than not let them win. He loved physics, the deep-hard science behind it, but he didn't have the desire to be someone's symbol of what a “black man” could do; he found that entire chain of reasoning offensive, insidious. It was always more important, in Jack's heart, to ask what “men and women can do or should do” - because he had always hoped, and continues to hope, that humans can apply a little logic, a little reason, to make the world better. Jack was an idealist. He had wondered, over the years, what would have been different if he had “gotten his PhD” - but that wondering was trumped by life's path ... Jack was a searcher, searching for truth, for wisdom, and not suited to being a professional academic.

The ride to work followed part of the Indianapolis “Cultural Trail”. He worked as a data mining engineer for Charybdis Systems<sup>2</sup> – a company which specialized in field of marketing/sales knowledge discovery. His boss, and the owner of the company – Daniel Brown – had a very flexible policy when it came to work hours; his view was “the target, the goal, is important ... the rest is bullshit”. Jack liked working for Dan (as Daniel preferred to be called); it was a small business, only 10 employees, but they had loyal customers and a stellar reputation for attacking the hard problems in the world of big-data and machine intelligence.

“Charybdis” was also the code name for their “sieve architecture”: a design concept developed by Daniel in the early 1980's while he was still in college. Back then there wasn't even the computing power to explore Daniel's ideas, but that didn't stop him from making notes, designing his dream computer – a machine architecture, a networked system, designed to devour data in bulk. In one end went files of all types – text files, .PDF files, structured data, multi-media, news feeds, emails – and out the other end came connected frames, Prolog rule lattices, and meaningful associations, with a natural language interface attached. Before data mining became “a thing”, Daniel was a path-finder in the field, discovering, living as a pioneer, a mountain-man, in new kind of wilderness. His patent, which was

2 Charybdis Systems was founded by Daniel Brown; a well known software architect and gay-rights activist in the Indianapolis area. Daniel founded the company in 1995 and he was one of the first in the nation to implement a 100% Red-Hat grid-computing architecture, utilizing only open-source tools in his workplace. “Why pay for shit, when the good stuff is free?”, was his motto – a motto oft repeated by him when drunk.

approved in 2003, was for a technology/process he called the “information reactor” - but the name he gave it internally was Charybdis ... and that system would soon make history.

In 2006 an online mortgage/loan company, Teller Credit, engaged Charybdis Inc. in a test project – they wanted to see if Dan's system could do a better job at identifying low risk clients for the sub-prime real estate market than their human agents. Dan was successful at developing the rules, the heuristics, for doing just that – with the help of Charybdis. But Dan discovered something else, or rather Charybdis discovered something else, concealed in the data ...

On December 2<sup>nd</sup>, 2006, the Charybdis system had been devouring data for 2 weeks straight; all of this was intended to further perfect the “low-risk/high-risk” rules and algorithms that were being provided to Teller, for a fee ... after billions of iterations something else popped out. Charybdis, using its own kind of natural language generator, produced a statement, repeated, idempotent in meaning, in 1,000 lines of output. This repeated screed, this cryptic statement, coming from the mind of a networked system of data mining computers, said the following:

*“Run, hide, outside, no shelter in the storm – sell now, don't buy.”*

Teller Credit dismissed this as funny, but was happy with the rest of Dan's work – and they were, for at least a brief while longer, very good customers. “Their checks clear”, as Dan would say so often. But Dan was curious about this message, so he called up an old “friend” of his and met him for drinks on Mass-Ave:

“There's no way you called me to see how I was doing!”, Dan's friend, Harold Witt, said with happy frown.

“Harry ... you work in investment banking still ... right?”

“Yes ... and believe me it's not that great ... these days, shit ... I just can't say ... but I heard you are doing well, cheers to that Mr. Dan!”, and Harry lifted his glass.

“OK, but I was wondering if you could tell me something ... is there a problem with the sub-prime real estate market?”

At that moment Harry's face turned white ...

Harry knew the truth ...

Harry knew the “ugly monster” that was lurking below the quasi-placid surface of the U.S.

economy – and in the guts of all the CDS<sup>3</sup>, CDO<sup>4</sup>, and layers of derivatives<sup>5</sup> bets that hung over the financial world like a myriad of Damocles' swords, there was disease, puss, rancid nothingness. Others, in 2006, discussed the “truth” as well – but they were mocked, marginalized, silenced, and when necessary (and possible) killed. The “dirty little secret” of the U.S. economy, in 2005-2006, was that it was held up, inflated, by a home-buying/home-selling frenzy – as bad, or worse, than Tulip-mania<sup>6</sup> so many centuries earlier.

“Harry ... I've been doing work for Teller, and my system ... fuck ... it's saying some weird shit about the real estate market.”

“So this isn't a date”, and Harry's happy frown turned real.

“Sorry ... you know we'll always be friends?”, Dan smiled.

“Come on, ask me whatever you want ... I can't talk about confidential shit, you know that ... right?”

“Sure ... I brought a print-out ... take a look at this phrase ... Charybdis wrote this ... repeated this ... almost for emphasis ...”, Dan showed the words to Harry, and Harry's expression grew more crestfallen – even worse for the knowledge that this wasn't a “date”.

Harry scanned for the nearest waitress, “Hun ... can you get me another ... a double ...”, she took Harold's order and walked back towards the bar. Harry just stared at his empty glass for a few moments.

“Buddy ... I'm telling you this because in a few months no one is going to be able to hide it ... sure, they'll probably spend ... you know ... the bullshit talking-heads of business news reporting ... those fucks will likely spend the next year, or even two, telling us 'all is well' ... and the more they repeat that phrase, the more a rational person will see it for what it is ... A BIG FAT FUCKING LIE ... I don't know what kind of messed up wizardry you programmed into your machine, but it's telling you

3 CDS – Credit Default Swap, this is a kind of “derivative” or “bet” applied to some underlying collateral (or bet) that represents real value to some party in a financial relationship. These are often used to hedge against outcomes that work against a core business' market function. (too big a topic for a simple footnote) Think “tontine”, where everyone expects the other guy to “die first”.

4 CDO – Collateralized Debt Obligation, this is a financial instrument that represents a set of loans, as a population – rather than individually. MBS – Mortgage Backed Securities – are a means by which a CDO is traded, as if it is real wealth and not simply a giant dark pool of indebtedness.

5 A “derivative” can be thought of as a financial transaction that is actually a bet on some underlying collateral or bet. These are varied – there are many kinds of derivatives bets. These bets are used to hedge against unfavorable outcomes in the market place. Inherent in this kind of betting scheme is the belief that there will always be “winners and losers” - no one expects everyone to “lose”.

6 Tulip-mania occurred in Holland in the early 17<sup>th</sup> Century. It was one of the first great modern economic bubbles. At one point, a single tulip bulb was sold for the equivalent of 1 years wages for a skilled craftsmen. Of course this bubble, like all economic bubbles before and after, eventually popped – leaving the economy in shambles.

the truth Dan ...”, Harold paused, and then applied his idempotent messaging, “... it's telling you the truth”.

Dan decided to take a risk and do a write-up of his findings, and Charybdis' prophetic fragment, and submit them to an obscure machine learning journal, “Gnosis”, in January 2007. By the late spring of that year the truth was impossible to hide, the U.S. real estate bubble was imploding, and his phone was ringing off the hook – mostly NOT new customers, just journalists wanting to know more about his “magical fortune telling machine”. There have been days, many days, since 2007, when Dan has regretted his decision to publish, to allow Charybdis that audience ... but he couldn't take it back. Those years, 2007 and 2008, were scary for Dan – mainly because he had to deal with the confused looks on people's faces, the sadness, the regret, the mental exhaustion and depression – he hated being the bearer of bad news, the Cassandra<sup>7</sup>, and he hated even more being around those confused people ... people whose paradigms were so flawed, broken, and ill-equipped for the age to come.

A few months after Dan's paper was published Teller Credit was out of business, broke – and their CEO was under investigation for securities fraud and 19 other related SEC/Inter-state Commerce Code violations. Dan never knew what happened to the Teller Credit CEO after that, Dan assumed he was in jail, following a conviction ... he'd heard once the guy killed himself, so many people just “disappeared” back then ... no trace, no one cared.

Jack loved Dan; Jack wasn't gay, he was as straight as they come, but he loved Jack's intellectual courage, his mind. Jack considered himself fortunate to find a boss, a mentor, so willing to be generous and open ... a man so willing to dance with the flames of the mind, to let himself get burned, and then try again. Dan, who was often moody, enjoyed Jack's company as well – today was “Wednesday morning coffee chat time”, a time for just Jack and Dan to do “blue sky thinking”<sup>8</sup> and to discuss upcoming “sprints”<sup>9</sup>. When Jack got to work, and entered Dan's office, he could tell something was amiss ... “he was in another one of his moods”, is what Jack thought.

“Close the door ...”, Dan said directly.

7 The ancient Greek god, Apollo, gave Cassandra the “gift” of prophecy. When Cassandra refused to be Apollo's lover, Apollo spit in her mouth – cursing her. She would continue to have the power of prophecy, but her curse was to never be believed, by anyone.

8 “Blue Sky Thinking” referred to brainstorming or open ended discussions of the direction for Charybdis and other company pursuits.

9 A “sprint” is a unit of project management work comprising all the tasks/goals to be accomplished in some time frame. This is part of Agile Methodology – more specifically, Scrum. Software folks would develop tasks, based on the input of the primary stakeholders (product owners for example), and then estimate the relative difficulty of these tasks. Once the tasks were agreed to, the sprint began – most being between 3 and 4 weeks in duration. During the sprint, nothing could change – that was sacrosanct. Any who – if you want to learn more about “Agile”, do it on your own time.

“Sure.”

“It’s a nice day isn’t it ... very nice ... big, blue, sky ... for big blue-sky thinking ...”, Dan said, half-heartedly.

“Yeah ... hey ... are you ok?”

“Ok ... I don’t know ... ok?”

“Listen ... we don’t have to meet this week.”

“No, dude ... it’s just that today is a kind of fucked-up anniversary and I’m not really doing well with it.”

“What kind of anniversary?”

“You remember I told you I had a sister, but she had passed many years ago?”

Now Jack knew this would be tough – tensor math, complex matrix reduction, synthetic algebraic fields, number theory were all easy topics for Jack; the messy stuff, the human stuff, the “mammalian brain” stuff as Jack would call it, this always made him uncomfortable. Jack’s childhood was nearly as ideal as childhoods came; his parents were both “black” like him, but they didn’t match the cultural stereotypes and were just as indifferent to their race. His parents had met and married at Purdue University – his dad studying to be an engineer, his mother a would-be math teacher. They were married after graduation, they stayed married, raised a family, and were still alive in – living in Terre Haute, Indiana. Jack’s dad was encouraging throughout his youth, his mother was kind but also the disciplinarian. He remembered most summers of his youth as a wonderland of camping, hiking, fishing, reading, thinking, and being with those who loved him, people he loved.

Jack knew the culture of his age – the hip-hop gangsta-rap crap. He knew the archetypes, and he simply didn’t fit them and was glad for it. There had been no great tragedy, no shootings, no drive-by’s, none of that – he had bottle-rocket fights with his buddies, fished for catfish on the lakes, and had a few dates (“few” being the operative term), a few late summer kisses, a few notes exchanged during trigonometry class. So, in general, Jack had a hard time with empathy for the tragic lives of others – sympathy he could do ... just not much better than that.

“I remember man”, Jack closed the door and sat down in the chair across from Dan – the desk in-between.

The work environment at Charybdis was “casual-casual”, meaning jeans, t-shirts, and shorts in the summer. The summer in Indy was ending, but the weather was still hot. Dan, despite being in his 50’s, wore plaid-pastel shorts, a black t-shirt with “HOOT” written in white on the front, and the

etching of an owl on the back – all of which belied his age. He was in good shape, and mostly the wrinkles on his face, his thinning hair, told Dan's personal truth – he was middle aged, not a kid, just like most of his generation ... a man running from the certainty of death, and heading towards it even faster as a result.

Jack sat quietly for what seemed like a couple minutes, Dan just sat there across from him – staring out the window towards the distance ...

“Man ... I hate to dump on people ... this is kind of messed-up ... I'm not sure, maybe it's because I had a bad break-up recently ...”, Dan had been seeing another man, Mike, for about 5 years. Mike and Dan were going to “get married” once it became legal – the very day gay-marriage was legalized, Mike left Dan, leaving a note and nothing else.

“Dan ... geez ... I'm here ... I'm ok with the messy stuff ...”, Jack really wasn't ok with it, but he knew what he was supposed to say, what “humans are supposed to do”.

“Did you know I didn't 'come out' until I was in college ... you know who I 'came out' to first?”

“No.”

“My big sister ... Nora ...”, Dan's eyes glazed over, a few tears forming on his face. Jack didn't know for sure, but it looked like Dan had been drinking the previous night ... probably too much ... probably alone.

“My sister Nora ... you know, I was scared and didn't think anyone would understand ... fuck, I grew up in Indiana back in the 70's and 80's ... and I played football and dated girls in high school because that's what I was supposed to do ... I hated the lie, the lie was killing me ... but I didn't know what else to do ... when I was at IU ... well ... I met a few guys like me ... but even there, back then, it was hard ... everybody was afraid of AIDs ... probably the gay men more than the straights ... and there was all this Reagan-Christian-Far-Right shit to contend with as well ... fuck ... when I told my sister ... my sister Nora, who was a few years older, visiting from Purdue ... my older sis just sat down on my bed next to me ...”, at this point Dan sat forward in his chair, arms crossed, and sobbing.

“My sis ... I didn't know what she would say ... I didn't know if she would be in shock ... I didn't know if she would disown me ... run screaming to my parents ... but I was in a bad place Jack ... a real dark place ... a hole filling with water ... She sat down there next to me ... on my bed at the dorm ... she put her arms around me ... she squeezed so hard I couldn't breath ... she told me she loved me ... she told me that whenever I needed to talk ... about any of it ... about ... shit ... even boyfriends I could just call ...”, Jack stilled himself, sat back up, and spoke clearly, with directness and intention.

“Jack, she told me I was her brother and she was my big sis and there was never going to be anything ever in the history of the world that would change that ... ever ... period.”

“She sounds ... sounded ... amazing.”

“She was Jack ... she was beautiful, as smart as me ... shit ... probably twice as smart as me ... she was fun Jack ... she used to dress like Cindy Lauper and dance like Madonna ... she was the most important person in my life ...”, Dan wiped the tears from his eyes and Jack could tell that “he needed this”, so Jack hung on ... as well as he could, despite his stomach turning over.

“She was incredible ... she was unique and irreplaceable ...”, and then Dan paused again.

“And she was killed ... murdered ... by some asshole ... some druggie ... for the few bucks she had in her purse ... that was September 9<sup>th</sup> 1983 ... a Friday night ... 35 years ago man ... she was hanging out downtown ... with friends ... just drinking, having fun, celebrating the first days of her last year at Purdue ... her senior year ... you know, she was accepted to CALTECH's Physics Department for graduate school ... shit she was smart ... and funny ... I know I'm repeating myself ... sorry ... but 'happy, funny, and smart'? - that shit rarely comes together in one package ... you know?”

Jack didn't know what to say, so he blurted out the first thing that came to mind.

“Did they ever find the guy ... the person that killed her?”

“Yes ... he was a drug addict ... a drifter ... a nobody ... she was probably going to give him what he wanted but he was so 'high' he couldn't tell and just shot her ... she died in the streets ... not surrounded by loved-ones ... her brother wasn't there ... I wasn't there ... not her parents, just some scummy street in downtown Indianapolis ... fucking bullshit ...”, and Dan sobbed some more.

Dan picked up a picture, of his sister, and handed it to Jack.

“She was beautiful ... damn”, Jack remarked.

Nora had blond hair, blue eyes. She was medium height – or appeared to be in the picture, standing next to her brother Dan. She had a nice figure, or at least appeared to, in that faded photograph. She was dressed how Dan described her; the general chaotic wardrobe of a Cindy Lauper/Madonna acolyte. And there was something haunting about her eyes, as if they reached across the distance, the chasm – Jack hesitantly gave the picture back to Dan.

Dan talked some more, relaying hijinks from youth and other tales of him and his sister Nora. Jack listened because he was, to the extent that such things exist between a worker and his boss, a friend – and when Jack did have issues, he would talk to Dan (though Jack's issues tended towards the banal by comparison). So, yes – they were friends. They didn't really hangout much, outside of work,

because it was the work, the computer science, that they mostly had in common – but this was different ... Dan was opening up about a wound that probably never healed.

After their chat Jack made his way to his cube. The other code-monkeys were there, paddling away, skype-ing, mapping obscure file formats and debating about the latest episode of “Dr. Who”. Jack, who was almost always focused, had lost his attention, his clear mind – that conversation with Dan was draining, but there was something more, something different ... and he didn't know what that “difference” was. Jack wasn't a psychopath – he'd taken tests, when he was younger. He had a very high I.Q., around 160, but that didn't really impress him as much as it made his parents happy. When he was 10 his teachers were afraid he might be slightly autistic – he wasn't, he was just excessively bored. After testing them, the psychologists, reassured his parents that “Jack is fine ... he's just working through a lot of complex thoughts at a young age”. This was true, Jack did ponder shit, when he was young - while his friends were mostly pondering the depths of the “Fresh Prince of Bel-Air”.

Jack cared for Dan, and Dan knew enough to invite him, Jack, into his pain. Jack preferred to steer clear of the mess of human brokenness, the malaise, the passions. Jack could get emotional, but more often than not it happened while playing chess with some Aspergers ten-year-old ... when the kid was winning. Jack dated, infrequently, and this didn't really annoy him too much – he had a queer sense that “when the right girl comes along, you'll know” (or perhaps that's what his mom would repeat to him during every visit and that's what stuck in his brain via repetition). Jack was an emotional being, connected, but he desired some deep unreachable thing – a thing for which language hadn't even been invented ... yet.

Jack was attracted to girls like Tess – he didn't know her as “Tess”, he just knew her as “that cute girl from the elevator”. But attraction was a superficial trap from Jack's perspective, and only one aspect of love. Jack dreamt of a woman he could be honest with, have conversations with, discuss philosophy, life, and courageously address the real world versus the fake one everyone presumed was real. Jack didn't have cable TV – he had cable internet, he simply refused to pay for “500 channels of stupid” (as he called it). He was horrified by “reality TV”, primarily because there was plenty of reality, for everyone, to engage with, all around us – no need for the synthetic version, “just step outside and greet it”.

This particular Wednesday Jack allowed his contemplative nature to overwhelm him ...

Jack thought about Dan, and how hard it must have been to be a gay man 30 years ago ...

He thought about Nora – he'd never met her, or even knew about her before this day, but his first

thought after the conversation with Dan was “shit, she could've been the one ... if only”. If only she had lived, if only he were born earlier or she born later.

Jack slogged through the rest of the day, taking his periodic strolls to get more water from the cooler. Jack was able to get some work done – not much, but some.

Jack's ride home was slower than normal, he meandered - deliberately so ...

Jack wended his way, taking the long way home, via the *Canal*<sup>10</sup> - he stopped to look at the giant carp which fed there, living fat and well, off of the decaying left overs of Indy's rather absurd water system. The people of Indy would pay money to ride their own little paddle boats, along this narrow and short stretch of water, and underneath were those giant carp ... just nibbling on the droppings of urban decay.

When Jack got home, to Riley Towers, he collapsed on his bed. His mind still pondering that heavy conversation, Dan's pain, and the story of Nora; Dan's older sister. He wondered what Indianapolis was like back then, in the early 80's – was it more violent? He wondered what Nora's dreams were – did she dream of being a great physicist? Did Nora dream of some man she would meet, one day, in the accidental chain of causality that is/was Life?

After a few hours of napping, Jack grabbed a beer from the fridge and played some online chess – but his mind was not in the game. He was being mocked by some Korean, some kid, who likely played nothing but online chess 24/7. He didn't care that he was losing – and losing badly. He didn't care that the kid, in broken English, was calling him out, meanly – and using foul language as well. Jack didn't care, and he didn't care to stop playing – he was ruminating on a thought, a problem, that had no solution, Nora ... “Nora” was a problem in search of a solution, or a question in search of an answer.

At 9 PM Jack finished his 3<sup>rd</sup> craft beer and went to sleep ...

He hated to drink alone and then pass-out, but he let it happen ... that night.

He would let the alcohol, the poison, mess with his mind.

He hoped a little hangover would clear-out the bile of existential pondering from his “buffer”.

The lingering memories of that strange day were troubling; “Wednesday style” and twisted ...

The last thought in Jack's brain before unconsciousness took over:

*“Fucking Wednesday ... nobody knows where they're going on Wednesday ...”*

10 The “Canal” is a man-made canal system which bisects part of downtown Indianapolis, running parallel to the White River – not far from the IUPUI campus.