Vaporizing Cassini

J.P. said, "USS Nimitz and USS Roosevelt UAP encounter videos have now been verified as real by the U.S. Navy. The US Army has just signed a CRADA deal with the R&D study of UAP material recovered from the Roswell UAP crash, according to the web media. And the Pentagon report came out this morning."

"Meh," said his wife. She was a tall, good looking woman in running shorts. She had just finished her morning stint of 5 miles. She had long legs, short cropped hair, and large hands, like she could make good fists if she needed to.

"The assessment says that the lack of "high-quality reporting" on the events "hampers our ability to draw firm conclusions about the nature or intent of UAP." In other words, they still don't know what the UAPs were, though the report suggests a range of possible explanations. The most intriguing was "Other." I think this is good news. They are at least admitting they can't explain the phenomenon." True, the report was not exactly what he had hoped for but it opened the door for possibility. Made UAP reporting respectable. Personally, J.P. prefers the older term, UFO.

J.P. was already shaved and dressed for the day. He was sitting at the kitchen table, which will become Jill's laptop computer table after he leaves. Since Covid, Jill, a Burger King insurance adjustor, works from home. Even after things lightened up, Jill continued to work from home because the people she saw every day were jerks, she said. Jill says whatever is on her mind. J.P. sometimes gets the feeling Jill has run out patience, with her job, and with J.P.

"There's a connection between aliens' appearances and farms across the world. They must be studying our agricultural capabilities. Not to mention all the sightings at missile bases

and power plants. They're studying every detail of what holds our society together—energy, weapons, food."

"Take the garbage to the street when you leave. Don't forget." She kind of shook out her hair. By that J.P. meant she ran her long fingers through the short sweaty strands and fluffed them up. When they met, she had long hair, almost to her waist, but she cut it one day, on a whim. She poured herself a cup of coffee.

J.P. has a right to talk about UAPs, as they call them now, because he teaches astronomy at a local state college. And he has an especial interest. When he was a child, four or five, he actually saw one suspending benignly in the afternoon sky while he was standing near his parents' strawberry patch in Folsom, Louisiana. It was suspending, but back then J.P. didn't know that word. He also didn't know about flying saucers at all, so he couldn't have made it up off TV. The thing suddenly disappeared. He had the feeling it took off at tremendous speed. Today he would say--zero knots to light speed.

As usual, Jill did not have anything to say on the matter.

At one time, J.P. thought he might have Asperger's, or at least be on the spectrum. He made it through college with flying colors but he was bad at business deals. He was also directionally challenged and he couldn't stand collars on shirts, and he couldn't stand socks, and he saw significance in numbers on license plates, like 911. Or 606, their anniversary. Not long into their marriage, Jill gave him a test off the internet, but half way through she abruptly aborted it.

When he was in college, he worked out another explanation. Maybe he had been looking up in the sky as a four year old, waving good bye to the space ship that had dumped him off as an experiment in the yard of a small-town southern family with a strawberry patch and a house

with a balloon mortgage. He had worked out, more whimsically than seriously, that the aliens, of which he was one, had implanted false memories in him, and in the family, that they had had a baby four years before, and, had implanted memories in the whole town for that matter. When J.P. lived in a college dorm, and he would find himself alone in the TV room in the basement, he would become so uneasy he would leave. That was after he had read his first UFO abduction story, an old one from the sixties. Back then Betty and Barny Hill were big in the news, though most people thought they were crazy.

On that Friday of the week, garbage day, Dr. J.P. Melrose came into the classroom a few minutes early as was his custom. He spoke to the few students already there, and he opened his laptop and began pulling up his materials for the class. A conspicuous noise interrupted his search for a particular power point. Raymond Carter had entered the room and dropped his books loudly on one of the tables near the back of the room. Raymond Carter was one of those perplexing students who loved to argue, was fairly intelligent, who wrote soundly if not imaginatively, but was rarely guilty of doing the day's reading. He was a journalism major and UAP skeptic and he was taking Astron 101 to fulfill his department's requirement for an easy science class for all majors.

"Sir?" he said, picking up on the previous class's discussion as if there had not been a day's interval and the roll had been called and announcements deployed, "I happened to catch the Pentagon news release this morning, and one of the videos. The navy's radar imaging to observe the UFOs seemed to be on the par with the Ghost Hunter shows, and, as usual, the footage is only at night. Isn't that a little suspicious?"

The class stopped checking their phones and texting and arranging their notebooks. Most of the students were not astronomy majors either, but like Raymond were picking up a required

science. At least Raymond's forays into skepticism if not annoy-the-professor chatter served to keep their attention.

J.P. did not say, 'For every hazy video, the government has 100s more that are sharp and clear.'

J.P. did say, "That's a false equivalence. There are incidents of the same caliber that happened during daytime that have never been declassified."

"Funny that the actual footage is so grainy, like a prerequisite for photographing UFOs requires somebody's grandmother's Polaroid." His response evinced a few snorts.

"Filming something a mile away moving hundreds of miles per hour in unpredictable directions will not look as defined as filtered selfies."

The class looked elated that once again Dr. Melrose was being distracted from one of his boring lectures to his nattering on about UAPs. Just for that, J.P. decided to give them a pop quiz at the end of class.

J.P.'s defense of UFOs had earned him a reputation as a fun teacher, but his colleagues' opinions were less than admiring. Luckily, this small-town college valued popular teachers because it translated into money. And J.P. is a full professor, so he has all the rights and privileges of a secured position. Once his full professorship was bestowed, he had not held back on his UAP opinions.

Jill was another matter. When they were first married, Jill had listened skeptically, but fondly amused or so he liked to think, to his theories. But lately Jill and his department seemed to be on the same page, as if he were another beautiful mind, a John Nash, a little "tetched" as they said in Folsom. J.P. feels as though he was on the brink here with the release of heretofore classified information and that it was just a matter of time before he will be in everyone's good

graces. The Pentagon was actually saying it could not identify 438 of the suspicious objects. Even Raymond Carter and his comic relief needed to step back once this monumental fact sunk in. He was a little disappointed the Pentagon stopped short of saying extraterrestrial. And he was a little dismayed Jill did not share his enthusiasm. He blamed the government and their weasel words. Tonight, he will pull out the full nine-page report which he had printed out this morning and go over it word for word. He will show her the videos.

J.P. cleared his throat and said, "Ok, let's get started. Today's lecture is on Saturn." There were audible groans.

"Saturn is the most elegant planet in our solar system. It is famous for what?"

"Its rings," said a handful of disaffected voices.

"Yes, for its bright yet eerie rings. This gassy giant has over sixty natural satellites in orbit around it. It also has one artificial satellite: the remains of NASA's vaporized *Cassini* spacecraft. In this module we will explore the weather observed in the atmosphere of Saturn, the strange organizations that develop within the rings. We will also explore its wide assortment of moons — Titan covered in fog, two-sided Iapetus, wild Prometheus, and Enceladus and its icy plumes."

It was a good lecture, he thought later in the confines of his office. An elementary lecture, suitable for layman, for students needing a science requirement. In this course, he tried to make the history of astronomy take up as many classes as he could, and he steered away from anything that smacked of math. He chose words such as "elegant" the way the late great Carl Sagan had intrigued housewives and children with his passionate diction.

That was back in the 90s, the early 1990s, as Voyager I headed into the unknown, described on *Cosmos* in Sagan's boyish baritone. If he were alive today! How intrigued he would have been. Three decent videos from the Pentagon and the nine-page report!

For more than a decade, the U.S. Department of Defense had been quietly cataloging and investigating scores of bizarre encounters—most from the U.S. Navy—of ships and fighter jets tangling with, or being tailgated by, unidentified flying objects.

For the past three years, Jill had been evolving into an unidentifiable phenomenon. It is his passion for UAPs that is her biggest turnoff J.P. believes. Things had gotten so bad, J.P. was actually counting on the Pentagon to redeem him to his wife.

On September 15, 2017 right in the middle of divorce discussions, initiated by Jill, her father was diagnosed with a slow growing brain cancer. J.P. remembered because it was the same date the Cassini spacecraft plunged into Saturn, becoming part of the planet it had been orbiting since 2004. The intentional plunge into the planet had the goal of ensuring that Saturn's icy moons – in particular ocean-bearing Enceladus – would not risk being contaminated by microbes that might have remained on board the spacecraft from Earth. J.P. was moved to tears, something that rarely happened to him, but it had an unexpected perk when already in a rare emotional state he held Jill, devastated, and she, though shocked, mistakenly thought his subdued sobs were for her father.

Cassini was launched when J.P was in the seventh grade. He had grown up with its discoveries, its well...courage. At the end of the voyage, out of fuel, Cassini hurled itself into the hot gasses, pointing its antennae at Earth as long as it could. It was gone in 85 seconds.

All plans for divorce came to a halt after Cassini's vaporization and after his father-inlaw made his announcement. Instead of splitting up, Jill proposed they stay together until after her father's death. She could not stand to disappoint him. J.P. saw it as a reprieve, as an extended time in which he could win her back. But things did not change. He failed to convince Jill that his UAP theories were valid. He continued to remain clueless about what he should say and how he should act and be a husband. Getting ready to go home, he remembered he had not put the garbage on the curb.

As he was piling books and papers into his briefcase, the phone rang and a young man's voice (at first, he thought it was a student) was introducing himself as Randy Whittier and speaking about the Pentagon's report in the NY Times, and the unveiling of the videos. It was a local TV station. "We'd like to interview you, Dr. Melrose, live. The program airs at 6. We'll highlight the Pentagon report and show one of the videos. Then we'll cut to you and get your drift."

"I'll do it," J.P. blurted out. He was interested. He was more than interested. "I'll be there." Now, J.P. had the opportunity to connect with Jill in a spectacular way. To help make UAP reporting normal. He decided to stay in his office until it was time to go the TV station. He called Jill but she didn't answer. He texted her a message to turn on the news at six, and turned off his phone. Texting was better than speaking. Speaking was better than not speaking. Over the years, accompanied by great drama, he had learned to let Jill know if he would be late. And he had learned the monumental importance of remembering birthdays.

A year into their marriage, Jill announced she did not want children. J.P. had acquiesced without argument. In fact, if he let Jill make all the major decisions they got along well, up to a point. Then came the complaining she felt isolated and lonely. As far as the baby, only Jill's parents were disappointed in their decision. His own folks seemed relieved.

With plenty of time to spare, J.P. headed out. At the TV station he was ushered into a waiting room and offered coffee. He was almost an hour early. He went into the little bathroom of the waiting room and looked into a mirror. Maybe he should have gone home first. He looked a little seedy as Jill would say. He needed a haircut and his plaid shirt looked tired.

Eventually a young woman dressed like a bank teller appeared in the door. "Time," she said. They walked down the hall to the studio. Randy was talking to a camera man and when he saw J.P. he waved him over to three director chairs. In one of them sat Raymond Carter. "I think you two know each other. Raymond's doing his internship with us. I thought it good to have the both of you, the skeptic and the believer, making comments, so I talked him into being interviewed too. Sorry, this is so last minute. But we had a spot."

"No problem, boss," said Raymond. Then he grinned at J.P. "Dr. Melrose, long time no see."

J.P. nodded and climbed into one of the chairs. He could handle Raymond. He handled him every Monday, Wednesday, and Friday.

"So cute," said the bank teller woman, "a professor and his student."

After local news, the camera J.P. and Raymond were sitting in front of started blinking and Randy spoke in bowel deep tones:

"Late last year the Senate passed a bill that required U.S. intelligence agencies to share what they know about "Unidentified Aerial Phenomena," or UAPs, the present term for UFOs. That report was released just this morning. Happily, for both sides, believers and skeptics, it doesn't confirm the existence of alien spacecraft. But it doesn't rule them out either.

"The report states, 'Some UAP appeared to remain stationary in winds aloft, move against the wind, maneuver abruptly, or move at considerable speed, without discernable means

of propulsion. In a small number of cases, military aircraft systems processed radio frequency (RF) energy associated with Unidentified Aerial Phenomena." According to the Pentagon UFOs remain unidentified and mysterious. The strange encounter with the UFO you are seeing in this clip is one of more than 140 that US intelligence cannot explain. This one was observed by 2 Navy jet fighter pilots off the coast of CA.

"We have here tonight Dr. J.P. Melrose, Professor of Astronomy at Northeastern University and our journalist intern, UFO skeptic, and student at UNE, Raymond Carter. "First, Dr. Melrose, can we have your opinion?"

"Well, my happy opinion is that the report takes us one step into the realm of conversation outside of the crazy factor, if nothing else. Over the years pilots and others have seen things which are clearly impossible within our world, but have been afraid to share that information for fear that they would be laughed at.

"It gives permission to start looking for them in a more concerted way, using things like artificial intelligence and pattern recognition, taking radar data from all over the country and trying to look for anomalies rather than just relying on what amounts to gunsight data from military aircraft. That is all I hoped for at this point."

"But do you think they are real, Dr. Melrose?"

"What is it you are asking? Is it something created in the visible world out of delusion? Is it something other countries might have created, you know, China or Russia? I think if China or Russia had this technology, we would know about that by now. So, I am a guy who has seen one, a UAP, myself." J.P. stared into the camera a second for effect. He felt a surge of relief. "OK, I can tell you right now that I am enjoying some validation knowing that this is not just something that I imagined, but I am not here to talk about what I saw."

"But what are its intentions? Suspending the old explanations of swamp gas and weather balloons for the sake of argument. What if it is Russia or China, or even both?"

"Russia or China is the new swamp gas. Over fifty of these things were tracked on radar swarming U.S. battleships. A dozen swarming the USS Omaha at one time. No foreign government could have built or financed a fleet of these things, waiting secretly to unleash them to use for global domination."

"Mr. Carter? Want to weigh in?"

"It's funny how people can extrapolate stuff." Raymond glanced at J.P. amusedly. "To understand the videos, all you need to do is ask any fighter pilot familiar with advanced camera systems. What looks like great tremendous speed and impossible maneuvers is just a common optical illusion caused by the effects of the state-of-the-art technology."

"Well, that's a relief," Randy said. "I hope you are right. Anything else?"

"Terrorism is losing its appeal. How is the government supposed to justify a defense budget now? I'll tell you how. Space Force.—"

"And define Space Force for our viewers."

"Space Force is a new branch of the Air Force designed to develop the use of space for military purposes. But the space craft they are so concerned about are complete illusions, or easily explained. Just erratic dots of light. A million possible explanations. And tell me why supposed aliens would put lights on their spacecrafts emitting in our light spectrum which would be visible to humans?"

"Dr. Melrose, any last words?"

"Over 8 million species exist on earth. The universe is infinite and so are the probabilities of a species to evolve like us. Humans on Earth are just 315,000 years old according to new

calculations, and we only now can break the sound barrier. Imagine species starting before us, their technological abilities.

"The report is important because it opens the door for a serious look at UFOs. Specifically, it encourages the U.S. government to collect better data on UFOs, and I think the release of the report increases the chances that scientists will try to interpret that data. Historically, UFOs have felt off limits to mainstream science, but perhaps no more. I am satisfied." J.P. realized he'd used the older term.

"Mr. Carter? Last word?"

"Perhaps these videos were designed to push us into lockdown and destroy freedom.

Make us so desperate to get back to normal we'd do anything, even take the experimental Covid vaccine."

"You both have raised some interesting questions."

J.P. knew he had won. Disavowing the science of Covid vaccines made Raymond look like the kook. He felt almost happy. If only he knew what happiness actually felt like. He will know when he sees Jill.

#

Jill met him at the door. "Where have you been?" Her hair was plastered to her head almost as if she had been swimming.

Her healthy skin looked as though it had developed a mineral deficiency since that morning and her eyes were red and foreign.

J.P. had forgotten to turn his phone back on in his haste to get home. "I was at the KNOE studio. Being interviewed about the Pentagon report."

Jill said raggedly, "My father died. Emergency surgery. A

myocardial infarction on the table."

"Jill." He reached for her. He knew that was the thing to do.

She shook him off. "You have to leave. As soon as you can. No more, J.P. You can come to the funeral if you like. I don't care."

"You did not see my interview?"

"Are you crazy? I was at the hospital. Are you crazy?"

#

J.P., have you had enough?

J.P. had pulled over and parked on their now dark street after he realized he didn't know where he was going.

The question came from somewhere deep in his brain. But the metal voice did not sound like his own. J.P. got out of his car and leaned against the door. He stared up at the night sky. Some cool light was emanating behind the clouds. Interesting, but he remembered he had just lost Jill for once and all. He stared up at his old friends, the stars and planets. Dark energy was pushing them away faster and faster. Every night he looked up he knew he was seeing less. Like looking at himself and Jill.

It's time to go home. This time the voice was coming from the long shadows of the trees lining the street.

He came out of the shadows of the cypresses the city had planted so long ago they had some height and substance. Behind them, glittering between tree trunks and gnarly cypress

knees, was Bayou Desiard which wound through his neighborhood and on past his university.

"Henghist?" J.P. said.

He shook his head slightly, trying to remember why the intruder seemed familiar. He was stocky but not fat, not muscled, and medium height. Extra bulk but more solid than flab. He had a military crew cut. He was wearing one of those one-piece jumpsuits that old men favor, but he wasn't old. The jumpsuit was an indescribable color but flashy.

J.P. said, "How did I know your name?"

You have been screened off with clouds. Now you are not.

He seemed to be looking at J.P. respectfully with his large eyes in his narrow gray face. At that second J.P. felt the same sensation he'd had from his one sky dive. He'd drifted too far, and mesmerized by the landscape, had opened his chute a few seconds late. When he returned to regular speed the tremendous opening shocked him upright. He crash landed and broke his ankle. He had scared Jill so bad she made him quit, not realizing the whole experience made him feel normal, with something that could only be called fear.

He knew he was facing an alien.

You were put here to explore.

Explore what?

Extreme loneliness.

How did you get here? J.P. thought. Extreme

loneliness? Was that the heaviness?

Then he thought, How far is your planet? Primitive vocalizations seemed odious and unnecessary. Do you have weapons? Has your planet run out of resources? Do you wish to adopt Earth's technology? J.P. remembered from his research that light gray color was more benign than dark gray. Henghist's face glowed lightly.

- J.P. knew diverse species existed in all shapes and forms from vegans to carnivores and cannibals, but with always the possibility for sensate evolution.
- J.P. was given to believe wherever Henghist was from, his planet had no need for Earth's primitive technology, carcinogens, litter, petroleum guzzling carbon monoxide belching vehicles, and disposable polymers.

Jill's form appeared a brief second. Keep your head on straight she thought to him, looking at him not unkindly.

I will.

Behind Henghist, behind the cypresses, a familiar craft lit up the bayou and lowered gently down on the dark water in its own pool of liquid light. It was elegant.

How do I know this is real?

Do you know what euneirophrenia is?

Yes. The peace of mind that comes with having pleasant dreams.

How else would you know that word? A metallic chuckle.

You have you-yesterday, you-today and you-tomorrow amongst your parts?

Yes.

What is it called?

Perdurance.

Do you speak French?

No.

Translate, ce pôle Oméga n'est atteint que par extrapolation; il reste de sa nature une hypothèse et une conjecture.

This Omega pole is only reached by extrapolation; it remains of its nature a hypothesis and a conjecture.

The water in the bayou turned translucent, then waxed turbulent, and a faint hum began.

Is it possible to construct, in the precisely meticulous framework of algebraic QFT, a theory in 4-dimensional spacetime that includes interface and does not rely on perturbative methods?

No, it has not been possible. It has been possible to do so only in 2 dimensions.

J.P took a deep sweet breath. Ok, ok. All right then. Let's go.

Jill appeared one last time, jogging past them in her running shoes down the line of cypress, her long legs and ponytail flashing in the craft's gentle blinding light.