NEST IN THE DARK
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Outside the Foggy Peak system, a Starfleet vessel encounters a strange subspace field that causes their warp drive to fail, only to discover that at the center of the subspace field is a Matryoshka Brain, a networked computer system large enough to completely surround a star and use almost all of its energy output. The Brain generates a symmetrical subspace field, and in doing so speeds up the relative passage of time faster and faster the closer the crew gets to the core of the system. At the outer edges of the Brain, time inside the field is moving at close to 25,000 times faster than the outside universe, and closer into the center of the Brain, time seems to be moving at millions of times faster.

What becomes clear almost immediately is that the networked processors of the Brain are simulating trillions of minds at speeds where whole lifetimes could pass in a blink of an eye. As the Starfleet crew attempts to make contact with the minds inside the Brain, they discover that the path it is on will take it through the newly settled Federation colony in the Foggy Peak system, and that in two days it will begin to interfere and disrupt ship traffic going to and from Foggy Peak. The substantial subspace field surrounding the Brain will cause disruption to a gas giant’s orbit and is already causing the system’s Oort Cloud to be thrown into chaos. While this gas giant does not have settlements on any of its moons, the disruption of its orbit and the countless cometary bodies in the Oort Cloud would cause devastation to Foggy Peak itself from increased asteroid and cometary impacts if the Brain isn’t able to change its course.

The Starfleet crew must understand what they are seeing, make contact with the inhabitants of the Brain, learn how to communicate with very alien minds operating on time scales far different than biological creatures, learn of their culture and morals, and convince them of the importance of changing their course.

**DIRECTIVES**

In addition to the Prime Directive, the Directives for this mission are:

- Seek Out New Life…
- Ensure the Safety of Federation Citizens

*Gamemasters begin this mission with 2 points of Threat for each Player Character in the group.*

Traits that can be used during this Adventure:

**Subspace Interference:** Anywhere inside the subspace field containing the Brain is filled with overlapping and powerful subspace transmissions that are unable to be interpreted by the Players. This is from the intercommunication of the Panels (see Sidebar below). All communication is limited to only 10 meters unless otherwise noted.

**Mental Blackout:** As there are literally trillions of minds operating at speeds millions of times faster than biological ones, characters with the Talents Telepath and Empath are unable to gain any benefits from them as they are unable to ‘hear’ or ‘sense’ anything over the white noise generated by so many minds. There are so many minds that a Gamemaster may also wish to impose a further Trait ‘Migraine’ onto any telepath as they are unable to keep the constant noise from intruding on their perceptions.
ADAPTING THIS MISSION TO OTHER ERAS

While this episode is set just after the events of The Next Generation episode “Relics,” you can modify the timeline and events of the episode for other eras of play as follows:

- **Enterprise:** This adventure takes place on December 12th, 2154, between the Season 4 episodes of “Divergence” and “Bound” (S04, E16 and E17) and occurs while the Enterprise is en route to the Berengarius system, a fairly new colony world for United Earth and a proposed location for a future starbase. As this is one of the few Earth colonies that far out, the stakes for speaking with the inhabitants of the Brain are great. The events of the mission occur much the same as written, though as the computer technology of the mid-22nd century is still fairly primitive, Mercury will not be able to download himself into the ship’s computer. Instead, Mercury will ask to accompany the characters back to their vessel to personally sample food and beverages in the mess hall. Unable to actually eat, he will chew food and gulp fluids and then spit them out politely back onto plates, glasses, or utensils, complimenting as he goes. He will observe the ship’s chef cooking a meal and even ask to help prepare a meal before the ship and the characters leave the area of the Brain. Mercury will then dissolve into nothing after bidding the characters farewell.

- **The Original Series:** This mission would take place in June of 2268, after the events of the Original Series episode, “The Ultimate Computer” (S2 E24). The Enlightened Brain is on course to intersect the Berengarius system, causing disruption to the starbase located around the planet and could cause the destruction of the drydock facilities that currently contain U.S.S. Excalibur and U.S.S. Lexington, both being repaired after the damage they sustained during the events of “The Ultimate Computer”. The events of the mission occur much the same as written, but Mercury will not be able to download a complex version of himself into the ship’s computer. The duotronic systems of Starfleet vessels will be able to handle a very primitive version of his personality, and it will inhabit the food systems, modifying orders as suggested in the main mission as he attempts to understand food and drink. Any interactions with the crew would be limited, with computer-like responses and very little personality except for curiosity and happiness at finding something new. No advantage to the ship’s computer will occur with Mercury’s presence, and after a short amount of time the limited copy of Mercury will transmit itself into deep space via subspace.

If there is a question if Mercury can inhabit the computer of a vessel, assume that standard computer processors as found on Enterprise-era starships are unable to contain any of his complex thoughts. The most basic level of computer he can inhabit are duotronic systems, developed by Dr. Richard Daystrom in 2243, the complexity is described above in the Original Series, and all ships built or refit after 2243 will contain these computer systems. Isolinear computer systems developed in the early 24th century will be able to fully host Mercury as described in the mission.
The Gamemaster may choose to read the following descriptive text that sets up this episode:

It’s close to the change between Alpha and Beta shifts, so there are more than the usual number of crew on the bridge as section chiefs and duty officers exchange mundane information about ships systems or gossip about the upcoming rendezvous with the Xi’an. The light mood of the bridge is interrupted by a warning chime from the helm console. Alerts begin chiming elsewhere in the ship at the same moment…

These alerts are caused by the vast symmetrical subspace field surrounding the Enlightened’s Matryoshka Brain. The current character at the helm station or at operations can make a single attempt at a Reason + Conn Task with a Difficulty of 1. With no Momentum spent, the Player will learn that there is a subspace field that is not only slowing down the starship in warp, but it covers a vast area. In addition, the character at the Conn station will notice that two subspace relays are out of position, not where they should be. Spending one Momentum, the Player will learn that the course of the ship is being distorted compared to what it should be. And with two Momentum spent the Player will learn that not only is space distorting more and more, but time seems to be either speeding up compared to the outside universe or the outside universe is slowing down.

The amount of time it takes to get this information is only seconds, but at that point the starship is too deep into the subspace field to stop the rest of this opening scene from taking place. Read or paraphrase the following to the Players:

The sound of the engines humming through the deck plates becomes deeper as everyone on board feels a shaking. On the viewscreen, the star trails contract and deepen in color, becoming red before another warning chime sounds, indicating that the ship has dropped to sub-light speeds. Space outside of the vessel is strange; instead of the starscape filled with stars from across the spectrum, only the brightest stars are still visible as dull red specs. Nearly in front of the ship is a diffuse red glow on the edge of the visible spectrum.

The ship’s momentum is currently taking the vessel closer to the glow at one-quarter impulse. While there is no ‘edge’ to the glow, a simple Reason + Conn Task with a Difficulty of 1 will show the Players that they are 5 AU’s (Astronomical Units, the average distance of the Earth to the Sun) from where the glow’s intensity picks up and that at the current speed they’ll reach it in a little over 11 hours. This is more than enough time for the characters to research the phenomena they have discovered, and they may wish to approach the ‘edges’ of the Brain more quickly once they have figured out there is no immediate threat. At full impulse power it will take a little over 3.4 hours to reach the ‘edge.’ They will also discover that the entire area around the phenomena is currently moving through space at about 1/3rd the speed of light with a course that will take it through the Foggy Peak system, which contains a newly colonized Class-M world with around 75,000 Federation colonists. Where they lost warp speed was technically still inside the outer edges of the system, and the subspace field is most likely the reason why the two subspace relays are out of position.

The phenomenon is a Matryoshka Brain (see Sidebar). As the Brain is an alien megastructure far outside of humanity’s technological reach, allow Players to come up with outside the box ideas on what to try to contact and/or study it. The Brain will not respond to hails on standard sub-space frequencies or even over light-speed bands; the characters won’t know why, but it’s possible the subspace interference could be making it difficult to detect. The following Tasks can be undertaken to either figure out what it is, or analyze phenomena.

CAPTAIN’S LOG
STARDATE 46137.5

We have just left the Foggy Peak system and are en route to star system 66-3-R-M2 to perform a search for a missing Starfleet planetary survey probe. But the time it takes us to travel there should be uneventful except for routine ship’s maintenance and diagnostics.
An Insight + Science or Insight + Engineering Task with a Difficulty of 1 for analyzing the glowing haze in front of the starship will tell the Players the following: With no Momentum spent, the glowing haze in front of them has a distributed mass of about half a standard Solar Mass (~1x10^30 kg) over a diameter of approximately a quarter AU and that the energy spectrum is primarily in the infrared spectrum, with barely any reaching into the human visual range. With Momentum spend they also learn that there is a tiny M-class star at the center of the objects, but all of the energy, including nearly 95% of the neutrinos being emitted by the star are being absorbed and re-emitted as waste heat. Applicable Focuses for this test include Sensor Operations, Astrophysics, and other similar focuses.

If the chief engineer or someone in the Engineering department wishes to immediately analyze why the warp drive is losing power, right when warning chimes go off, they may, but only a brief study can be undertaken before the ship drops out of warp. A Reason + Engineering Task with a Difficulty of 0 will show that there seems to be a subspace field already warping space-time around the ship. Analysis of the failure of the warp drive will require a Reason + Engineering Task with a Difficulty of 2. Applicable focuses for this Task include Warp Field Dynamics and Subspace Theory. With no Momentum spent, the Player still gets enough information to tell that subspace is turbulent and causing the nacelles to be unable to generate a warp field. By spending Momentum, the Player also learns that the warp systems themselves suffered no damage and that the subspace interference and the curvature of space-time gets stronger towards the center of the phenomena and spending more also gives the Players the knowledge that the interference isn’t directed at the ship specifically, but seems to permeate the space around them.

Gamemaster guidance: This interference is the subspace communications between the individual processing units in the Brain. This allows them to process information quickly without the limitation of light-speed. Creative characters may want to analyze the interference, and doing so will require a Reason + Science Task with a Difficulty of 3. Success will show that the interference is both patterned and complex enough that it may indicate vast amounts of information being shoved through subspace.

The strangeness of the stars can also be examined. A Reason + Science Task with a Difficulty of 2 with applicable focuses being Subspace Theory, Theoretical Physics, Astronomy, and Astrophysics. On a success the

A Matryoshka Brain is an artificial structure built around a star with many of the same techniques as a Dyson Sphere, Niven Ring, or Shkadov Thruster. Its name comes from the Russian nesting dolls where the larger doll contains a doll that is slightly smaller, and that doll contains a slightly smaller one than that, and so on. The Matryoshka Brain consists of multiple layers of objects in orbit of a central star, each object able to absorb incoming radiation, use the collected energy for computational processes, and then radiate waste heat. Only the innermost layer of these objects around the central star actually work off direct solar radiation as each layer orbiting further away would rely on the waste heat of the layer below it. The end result is a star completely covered by layer upon layer of objects, interlinked and processing data. This data can be any number of things, attempting to compute Pi to the googolplex decimal place, simulating whole universes in an attempt to understand our own, or in this mission’s case, being host to trillions upon trillions of sentient minds in a simulated reality indistinguishable from our reality. In fact, as these minds operate at computer processing speeds far in excess of modern computers, whole lifetimes can be lived by beings inside a Matryoshka Brain in nanoseconds. In this mission, this speed is increased even further by the subspace field surrounding the Brain, much the same as Starfleet computer cores, giving the Brain the ability to compute data millions of times faster than it would normally.

While Matryoshka Brains are composed of individual processing units, the individual pieces act as a massive structure spanning AUs across with the central star at its core being almost an afterthought. The cloud of processing units, in this mission they are “Panels” (see Panels Sidebar), is dense enough that all radiation from the central star is intercepted before it reaches the outer edges of the Panel cloud. This means that for all intents and purposes the central star is invisible and the only glow would be in the near infrared from waste heat of trillions of panels.

A Matryoshka Brain should inspire and intimidate any character seeing it with its sheer physical scale, and anyone with an idea of how much engineering went into building it would be humbled even if they personally designed the greatest mega-engineering project in the Federation. Even the scale of computing of this Brain would put to shame every other computer combined in the entire Milky Way Galaxy. What is a Matryoshka Brain? In many ways everything that’s been told above only touches upon its scale and importance.

WHAT IS A MATRYOSHKA BRAIN?
character will find that the reason that what few stars are visible and red is because of two things: a temporal acceleration (meaning time is moving much faster in the local region of space as compared to the outside) and a symmetrical subspace field, much like how Starfleet uses the same kind of field around its large computer cores on starships and starbases. Time is moving much faster inside the field, whereas at the position the ship dropped out of warp time is moving one thousand times faster than the outside universe, but the acceleration increases towards the center of the field to more than four million times faster. As a comparison, a Galaxy-class starship’s computer cores have a field that allow them to operate at 3.35 times faster than the outside universe. Symmetrical subspace fields can operate inside each other and inside an asymmetrical warp field (one that provides propulsion), but an asymmetrical warp field can’t form inside a symmetrical one, hence the starship dropping from warp. If the character also knows that the general course of the Brain will take it into the outer areas of the Foggy Peak system, a Reason + Conn Task with a Difficulty of 1 and access to data on the Foggy Peak system will show that the subspace field will intersect a large gas giant and pass through the system’s Oort Cloud. As time moves differently inside the field, this planet will, in effect, have its orbit modified and will disturb the comets, and will cause a lot of problems for Foggy Peak itself.

To figure out what the object is will require a character with a Focus of Computers or Terraforming (this Focus connects to ideas of building large space structures), has a background as a member of the Starfleet Corps of Engineers, or other applicable attributes as determined by the Gamemaster. Before the end of the Act, a character should be able to put together a lot of the clues from above and make an Insight + Science Task with a Difficulty of 2. This will allow the Player to figure out that what they are seeing is a Matryoshka Brain and that the complex subspace interference could resemble the activity of a neural network transmitting at faster than light speeds, meaning it could be one intelligent mind, or trillions working in concert...

It’s assumed that the Players allowed the starship to continue to drift on its momentum, but if they stopped right after entering the sub-space field, the same descriptions still apply. At the end of this Act, sensors will begin to show movement of the haze of objects besides their slow orbit around the center of the gravity well. You may choose to read the following to the Players:

There is a small increase of light at the core of the haze, deep red, but only for a moment before disappearing. Patterns begin to form in the featureless grey haze, long twisting lines and arcs of circles. Ordering the viewscreen to maximum magnification, the same patterns are seen, fractal in nature. One particular knot of converging mass is at a point directly between the starship and the center of mass.

Any character currently at a sensor operations station, or any bridge station may attempt a Reason + Science Task with a Difficulty of 0 to discover that there is a small knot of the objects combining into an object approximately the same size and dimensions as their starship, appearing to be a duplicate of their starship. This is not a perfect duplicate as it is made from the 30cm x 30cm plates that alternate between becoming almost perfect mirrors and perfectly black. They can also tell that a Class-M atmosphere is beginning to take shape inside...

Gamemaster advice: This Act should give Players a sense of wonder and amazement. The scale and power of the Brain should be enough to make the characters stand in awe even without knowing exactly what it is. Discovering that the Brain is on a course that could negatively impact a Federation colony should also give the characters a drive to figure everything out. Be careful to not give the impression that anything that is happening to the ship and crew is antagonistic. At first the Brain could care less that a starship has stumbled into their space. Then the beings inside become curious to see if this species is ‘evolved’ or ‘Enlightened’. It will be clear that Starfleet has never encountered anything like this before, barring any very recent reports from the Enterprise-D and the Dyson Sphere, so things should feel new and strange. The Players should want to get closer to the anomaly at the end of the Act to investigate.
As the characters' starship moves towards the duplicate they will notice more and more of the orbiting plates. They always seem to begin to drift in a random direction as the ship approaches, allowing the vessel to pass by with room to spare before they drift back into position. A **Reason + Science Task** with a Difficulty of 0 will allow the Players to notice that the plates they are moving past always seem to turn their black side towards them and increase in temperature slightly. This is due to the plates absorbing the radiant energy coming from the ship, not draining it, but acting more like solar panels on a sunny day. After a while they go back to their original orientations.

The object that resembles the character's starship is a fairly good reproduction. It looks similar on the outside except being that ever existed or will exist in it before saving the whole simulation to deep memory as a ‘possible quantum state of the universe’. Scans of the panels will show incalculable amounts of data being received, altered, and transmitted every moment. Thus, any scan of the panels will be gibberish as even the most advanced Federation technology won’t be able to keep up with the speeds and the amount of data it encounters.

The panels themselves are able to interact in other ways besides with their subspace transceivers. Their graviton emitters and ion thrusters can move them and anchor them together to build structures as seen in this adventure. Their on-board repair and replication systems can also generate objects and material not present, like when a Class M atmosphere is formed, or an engineering console. Local gravity can also be modified through their graviton emitters. Each plate, while individually small, should awe any scientist or engineer that encounters them. Any data analysis, scans, or attempts at tampering with the Panels can cause Complications through automatic defence systems, overloading the databanks of a tricorder, or even the occupants of the Brain actively trying to keep their privacy. The Gamemaster should increase the Complication range of any Task involving the plates by 3-5.

**CAPTAIN’S LOG**

**SUPPLEMENTAL**

Our discovery of an alien megastructure similar to what was called a Matryoshka Brain will undoubtedly send ripples through the Federation once our survey is complete, but that seems far from happening. The Brain seems to be responding to our presence, but without any indication of hostility or overt communications. We've been on approach to what seems to be a reconstruction of our ship; perhaps this is their attempt at first contact.

**MATRYOSHKA BRAIN PANELS**

The computational units that comprise the Enlightened’s Matryoshka Brain are referred to in this mission as ‘Panels’. These panels are approximately one meter by one meter and 0.2mm thick. One side of the Panel is black, and sensors scanning it will show that it absorbs almost all incoming radiation, in fact even ship board sensors have trouble getting readings on the panels from that side as the returns are miniscule. This side of the panel is used for energy collection. The other side of the panel is a perfect mirror, it reflects all energy and even emits waste heat from the panel after it has processed the incoming power and used it to power its computers. Between these two sides is the actual ‘Brain’, layer upon layer of molecular circuitry, subspace transceivers, quantum replication and repair devices, graviton emitters, and even tiny and hyper-efficient ion thrusters. Each of these panels plays host to tens of millions of individual sentient beings and simulation data for the area of their universe they currently occupy. Enough processing power is still left over to allow each panel excess processor time to allow the Brain overall to simulate and analyse the universe around them as well as simulating possible futures and alternate universes. As an example, it’s entirely possible the Enlightened have already simulated the Mirror Universe, along with every intelligent
for being made of the plates alternating between black and reflective. Wherever there is external lighting on the original, the duplicate also has it, including navigational lights. Interior scans of the ship are very hazy except that there is a Class M atmosphere inside at standard pressures and temperatures. No transporter lock can be achieved at this time due to the subspace interference.

There is one crucial difference in the navigation lights. This is the first of many tests the characters will run across. To notice this difference, a character will need access to a visual feed of the object and succeed in a Reason + Engineering Task or a Reason + Command Task (due to training dealing with First Contact Protocols) with a Difficulty of 1. If successful, the character will notice that the navigation lights aren’t flashing in the proper pattern. The green lights are flashing in a varying number of pulses followed by a pause. After a sequence of green pulses occurs there is a long pause before the entire sequence repeats. A Reason + Science (or Command) Task with a Difficulty of 1 will allow a character to know that these pulses are a five number Fibonacci sequence, “3,5,8,13,21”. A possible response might be to have the green navigation lights on board their vessel repeat those numbers, and if the characters try this the Brain will not stop the pulsing, it will continue to attempt to get the correct response. The response it is trying to get is the next number, “34”. If the characters flash the green navigation lights 34 times rapidly, the green lights on the duplicate will stop blinking and stay on, signifying success. The red lights on the other side of the vessel are flashing in a different pattern, “7,11,13,17,19”. Another Reason + Science (or Command) Task with a Difficulty of 1 will allow a character to know that these pulses are a sequence of five Prime Numbers. Once again, if the characters program the red navigation lights to pulse the next prime number, “23”, the red light will switch to being continually lit, signifying a success. These tests are there to make sure the crew of the ship are intelligent and can reprogram automatic functions of the ship and aren’t just parasites of some sort living on board.

At this point the subspace interference preventing a transporter lock fades away as most of the free drifting panels move further away from the Player Characters’ ship. The area where there is the strongest signal lock is where Main Engineering would be. Checking sensors again for environmental conditions in the area is a Reason + Science Task with a Difficulty of 0 and would show that the atmospheric composition, pressure, and temperature is an exact match to current shipboard conditions, but gravity is very low at about 0.15G’s. The Gamemaster may wish to use the Trait Low Gravity to increase the difficulty for Players that go aboard the ship. This is clearly an invitation for the characters to beam over. Once a party beams over, you may choose to read the following description of the simulacrum’s Main Engineering:

As the transporter beams’ glow leaves the area, you see a fairly accurate reproduction of main engineering in the dim glow of the warp core. Small hissing noises begin around you and there is a sharp smell of ozone as more lights snap into existence and light the room in a more normal way. Even in full lighting the section you see is entirely monochrome and made of overlapping panels of mirror and black. Taking bounding low gravity steps towards one of the engineering consoles shows them non-responsive and dark, but touching them gives the person the sense of a high frequency buzz moving through every surface.

Characters may scan the local surroundings using tricorders and similar devices with more detail then the shipboard sensors can accomplish. Any specific thing the characters are looking for requires a Reason + Science (or Security) Task with a Difficulty of 1. There is nothing wrong with the air and gravity is low because there are few sources of gravitons under the ‘deck plates’. The lights inside the room are white, but are subtly different from the white light of a G2V class star such as Sol, and would suggest a world with a slightly cooler star and a thicker atmosphere then what is present. The plates making up the ship and the room all still seem to be active in that they are communicating with each other through subspace. A close scan of a plate focusing on any technology present will require a Reason + Science Task with a Difficulty of 2. If successful, the characters will show that each plate seems to be densely packed with carbon nanotube data storage and what appear to be highly advanced positronic neural networks that run between the storage and a subspace transceiver. What is clear is that each plate could hold the contents of Memory Alpha thousands of times over.

At this point one of the more aggressive and abstract tests should occur. A character that is off by themselves, perhaps the one doing the scanning of the plates, will see a spike in power consumption. A nearby ‘engineering console’ will light up with strange symbols and text just as a ‘popping’ sound emanates from around (((insert character name here))). They are surrounded with an amber hued bubble that has cut them off from the rest of the crew.

The gentle sound of scanning tricorders is suddenly broken by a loud electrical ‘snap’ and a horn that beats with a sound similar to a honking elephant from Earth. One of the consoles lights up with strange symbols and text just as a ‘popping’ sound emanates from around (((insert character name here))). They are surrounded with an amber hued bubble that has cut them off from the rest of the crew.

For all intents and purposes, this should look like an automated security measure of some sort has been triggered. The honking alert sound will continue to blare until the characters outside the bubble solve the puzzle that is described in the following paragraph. This alert horn produces the Complication “Distracting Noise”. Any Tasks taken while the alert horn is sounding are unable to benefit from a character’s Advantage and increases the Complication.
range of any Task by 2, unless that character is deaf or can use another advantage to cancel out the distracting loud noise. As the bubble is brought into existence, the subspace interference returns and makes it impossible for a transporter lock to be achieved on any character currently on board the alien structure. Communication with the ship is still possible, but filled with interference, for all except for the character inside the bubble. Characters wishing to scan the bubble will require succeeding in a Reason + Science Task with a Difficulty of 1. A success will show that the bubble quickly materialized via a replicator-like technology. It is composed of a transparent titanium/cobalt alloy that acts as a room-temperature superconductor. It is airtight, prevents sound from moving through it from the occupant on the inside, and will disperse any energy from a hand phaser directed at it without showing any sign of damage. The character inside can be estimated to have about 10 minutes of oxygen. Please note: The Enlightened will *not* kill a character. This test is to see if the biological creatures currently there are not only intelligent but also possess compassion, something the aliens feel is necessary to communicate.

The console that lit up with symbols is a series of logic problems in an ancient (and therefore less complex) language of the Enlightened. It is designed to resemble a security alert and security override. To solve this puzzle, the Players will need to be successful in an Extended Task, with a Work of 10, a Magnitude of 3, a Resistance of 2, and a base Difficulty of 4, and the Difficulty decreases by 1 with each Breakthrough. This Extended Task must be completed in 10 intervals (minutes) before the oxygen inside the bubble runs out and the character inside begins suffocating. Each Task to complete the Extended Task takes 2 intervals, thus the characters get 5 attempts. If the bubble hasn’t been broken by 10 intervals, the character inside will take a non-lethal injury from lack of oxygen, and 2 intervals later the bubble will disappear to release the character because the Enlightened only wish to test for compassion and do not

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**PUZZLE SOLVING**

Some groups may not be science focused and are more focused on Command or Security, and if you feel like you should make puzzles that are a little more straightforward for your group, feel free. Some ideas would be the Enlightened making a rat maze for the Players to run through to find a goal, or anything else you may find in an “Escape Room” type situation. The main goal of these tests is to determine if the characters are both intelligent and compassionate. On the other hand, if one of your Players is a mathematician, they may be able to figure out what the numbers puzzles mean almost immediately without even having to make a roll. If their character could legitimately also figure this out, let them have it! That is great, and maybe even give the Player a point of Momentum. If that is not the case though, you should prepare a couple more mathematics type puzzles using Base 8 numbers and unique symbols for numbers. The Enlightened had 4 fingers on each hand, thus base 8 numbers, and this has held over into their digital existence as 8 is $2^3$. Remember that no test should actually result in harm to a character; the Enlightened are compassionate and wish to only communicate with compassionate beings.

Additional Tests can include:

- On the initial approach to the duplicate starship, the Enlightened could attempt to make a three dimensional maze of their plates that forms around their own starship, only allowing them to move forward in an attempt to make their way to the duplicate to find a way out. This would be a good opportunity for a helmsman or navigator to show off their skills with a Conn + Reason Task with a Difficulty of 2. To make this more difficult, the Gamemaster may choose to spend Threat to cause a Conn + Daring Task with a Difficulty of up to 3 (1 for each Threat spent) as the plates shift and reconfigure in complex patterns while the ship navigates the maze. The maze pulls itself apart as soon as the starship makes its way through it to the duplicate ship.

- Once the task of deciphering the alien text is complete, instead of letting the shield deactivate let a access panel open on the side of the pedestal of the controls where there are fine wires and circuitry that still have power running through them. To repair the circuits will require a Control + Engineering Task with a Difficulty of 2.

- A door can be between where the characters beam into the duplicate vessel and main engineering. The door mechanism doesn’t seem to be functioning properly. To open the door and keep it open requires two separate characters to perform actions. The first requires a Fitness + Security Task with a Difficulty of 1 to force open the doors and hold them in place against closing while a second character accomplishes a Daring + Engineering Task with a Difficulty of 1 to find the inner control surface for the door to disable to safety mechanism that is trying to close it.

- Once Mercury appears, Mercury could put on an act of not seeming to care about the existence of lesser life forms that may or may not be hurt by the passage of the Enlightened’s Brain. This would be to force the characters to make an impassioned plea, or a logical case for compassion and the right of others to exist. This kind of psychological test would require a Presence + Command Task with a Difficulty of 2.
wish to harm anyone. The Gamemaster may choose the character’s Extended Task Effect based on how they are approaching the problem. The individual Task rolls can be either \textit{Insight + Science}, \textit{Insight + Engineering}, or \textit{Reason + Engineering}. A character possessing a portable Universal Translator (Opportunity 1) will give the Player an extra dice for rolls involving the types of Tasks described above, as almost all of the puzzles being presented use symbols and iconography that are not easily understood.

Once the Extended Task is completed, the bubble will disappear in an amber-colored flash of light, the alarms go silent, and the console that the characters have been translating and tapping icons on goes dark once again. The interference with transporters once again disappears, but the characters will not have a chance to beam away before they finally encounter one of the Enlightened, a being named ‘Mercury’. The Act ends with the following descriptive text that you may choose to read to your Players:

\textit{The silence is a welcome relief after the honking of the alarms. As your suffering crewmate gulps mouthfuls of fresh air, a bright light emanates from the replica of the warp core, making some of your hearts miss a beat as the assumption of a crack in the matter or anti-matter feed must have occurred, until you remember it’s not really a warp core. The light seems to focus on a point five meters away from you and begins to strobe as it seemingly begins to print a shape into the air itself. The form becomes humanoid as a smell that reminds some of you of sickbay begins to emanate from the being taking shape, layer upon layer, in front of you. Finally, the light snaps off, leaving a two and a half meter tall humanoid standing before you, pale, naked, sexless, and nearly featureless except for two expressive human-like blue eyes and a well-formed mouth. It raises its four-fingered hand in greeting and says in Federation Standard, “I have prepared for this moment. It is good that my preparations were not in vain. You are explorers, yes? We are as well. You may refer to me as…’Mercury.’” Mercury is the name that issues forth from the universal translator after the being makes a series of words in attempt to describe itself. It continues, “You are now welcome here for a time, but that time is short.”}
Mercury as a character is naïve in how he believes that others will always act in the best interests of the greater good. In some ways he comes across as a child as he’s never interacted with biological lifeforms before. He finds the little things fascinating that most people take for granted, like breathing, eating, sleeping (this concept would terrify him if it is explained as it would resemble being shut down for large segments of time), and forgetting memories. On the other hand, he can come across as almost god-like and his name symbolizes that. Mercury is not just a messenger god of Rome (and the being that speaks for the Enlightened is a messenger of sorts), but is also a god of boundaries and travelers. When and if the Players explain the meaning behind the name given by the universal translator, Mercury will be concerned that the characters may begin worshiping him, and will try to explain that he’s not a god, just a very advanced being, and react with relief when the characters explain that they understand this.

Scanning Mercury’s body and getting information that makes sense out of the tricorder will require a Reason + Science or Reason + Medicine Task with a Difficulty of 2. With a success the characters will learn that his body is a combination of biological material resembling the epidermis of Earth corals, metal, and nanotube carbon skeleton, and superconducting wiring acting as nerves that connect to a central processing unit the size of a pea in the center of his cranium. He has no gastrointestinal tract as there is no need for him to eat, nor does he have an autoimmune system as the body that was created is not assumed to have to live long enough to need them. He will not object to being scanned, but will ask if he may do the same to an “exemplar of the species present aboard your starship”. If asked what the scans will be used for, he will respond with, “The same uses the scan you took of me will be for.”

One of the first things Mercury will explain, without a need for a Task, is the basic history of the Enlightened, edited for consumption by less developed cultures. He will leave out the fact the Enlightened came from a Dyson Sphere, but he will say that they came from a world of their own making. He will explain that his people became intellectually stagnant over millions of years and then chose to re-engineer stars to house the minds of their people before setting out to explore the galaxies. If pressed about the other Brains out there, he

The away team’s presence in the doppelganger of our starship seemed to trigger a security response, surprising those of us monitoring from the bridge. Even more surprising was that when the security system was disarmed, an inhabitant of the Brain appeared in physical form, giving us the rare opportunity to make first contact with a more advanced civilization than our own.
If asked about how many beings ‘live’ inside the Brain, he will say he has never spoken with any Enlightened from those Brains personally— it was not within his area of training. No matter what, he will refuse to allow any sort of technological exchange and would ask that any detailed scans of their plates that would detail the processors or subspace transceivers be deleted as the scans could be used to intrude upon the thoughts that beings were having at the moment of the scans, much like looking inside someone’s dreams.

Further information will require a Presence + Command Task with a Difficulty of 2. If the Task is successful, the Players spend Momentum, and Mercury is pressed on certain matters, he will give more information. Examples of this can include:

- If asked about how many beings ‘live’ inside the Brain, he will respond with “greater than a few quintillion at last count”
- If asked about how he prepared for meeting them, he will explain that he was created by six ‘parents’ that formed him from pieces of their own code. He was then ‘taught’ much of the historical archive the Enlightened had on biological beings, which is not very complete any longer as information from the time they were biological is vastly out of date. Then he observed the away team’s behavior for decades of his own time.
- Other things he may be asked about, the Gamemaster should come up with unique responses as befitting a being that really doesn’t want to share technology or secrets, but is happy to share experiences.
- If asked why they were unable to detect the Brain before interacting with its subspace field, Mercury will explain

The Enlightened have had a long and complex history that has led them from their isolated homeworld, to building Dyson Spheres, and then beyond physical existence. The following points are things that Mercury may share with characters, or specifically may want to talk around, not answering.

- The Enlightened began as a biological species and achieved space-flight tens of millions of years ago, a species began to explore the space around their home system. At the time, their home star was accompanied by four other nearby stars, but no others within a few hundred light-years as this cluster’s orbit was highly inclined to the galactic plane.

- The Enlightened gave up on space travel and exploration after it had charted the mineral-poor worlds of the nearby systems. But the invention of specific technologies that resembled 24th century replicators resulted in a cultural revolution of sorts and they began to dissolve asteroids and small moons for minerals to manufacture millions of stellar orbiting habitats that would go onto house trillions of beings.

- They made the decision to deconstruct their own home world, saving the wildlife they could, and began cannibalizing the mineral-poor worlds of the nearby systems to build a Dyson Sphere. The project took tens of thousands of years, but the result was capable of comfortably allowing hundreds of trillions of beings to live comfortably without worry of disease, starvation, or wants of any kind.

- Millions of years passed as the civilization inhabited and filled the Dyson Sphere. Thousands of separate civilizations rose and fell in this time and there were many times the inhabitants nearly destroyed themselves in war. Entire new species of intelligent life arose through natural evolution.

There were ages where swaths of the Sphere lost technology entirely and fell into barbarism. At one point a technologically enlightened body ruled over the majority of the Sphere, called ‘The Enlightened.’

- The Enlightened chose to abandon the Sphere and download their minds into computers, allowing extended life (as some segments of the population of the Sphere had done dozens of times over the millions of years of their history) and powered by the stellar corpses that still escorted their enclosed star through its long galactic orbit. They did this so they would have a chance to explore the galaxies they had never been a part of.

- Matryoshka Brains were constructed around each of the four companion stars and a mass exodus into simulated reality began to occur, with a few of their race wishing to instead remain behind to shut down the equipment maintaining the Dyson Sphere so the technology wouldn’t fall into the hands of less developed species. Each of the four Brains chose a different path, with one wishing to experience the galaxy they had for so long seen from the outside, the Milky Way, the others may have already left our galaxy.

- For hundreds of thousands of years, the Brain that wished to stay in our galaxy has continued to wander and explore, but staying out of the affairs of less developed species. The inhabitants exist in a perfectly simulated reality where they live, die (if they so choose), give birth, evolve, and adapt at speeds millions of times faster than reality. Those that live inside the simulation resemble the beings that first created the Dyson Sphere as much as a human resembles a Horta, and resemble their ancestors as much as humans to mice.
that by using the subspace field as a gravitational dampener they are able to hide the presence of the entire mass of the system, and sensor beams are just absorbed into the local space-time and lose energy before bouncing back a return.

There are a few things that the away team or Mercury may bring up specifically dealing with current concerns or wishes by either group. If the characters ask for an exchange in technology, no Task is needed; this is not acceptable. The Enlightened are unwilling to provide lesser-developed species with technology that they have not developed themselves. Mercury will state that the danger posed by such technology falling into the wrong hands has made them destroy starships that have previously stumbled upon their Brain. A Presence + Command Task with a Difficulty of 2 succeeding in trying to get more information out of Mercury about this old starship would result in him revealing that they were a ship of Romulans who visited nearly one thousand years ago (in the reckoning of the outside universe). If pressed on sharing technology, Mercury will ask them (politely) to leave before their welcome is revoked before dematerializing the same way he arrived.

Asking Mercury if the Brain can shift its course so the subspace field doesn’t interfere further with the Foggy Peak system will not require a Task. Mercury will explain that they had been monitoring the comings and goings of the colony ships and Starfleet vessels in the area and realized that ‘…the system you refer to as Foggy Peak has become inhabited by advanced biological lifeforms.’ They wished to approach slowly so as to monitor communications and get more information about the Federation. He will also explain that they did not know if the Federation’s presence would still be there once they arrived. This may sound strange, but time in the outside universe is a variable amount of time inside the subspace field of the Brain.

Once Mercury understands that the course they are on will cause Starfleet and the Federation concern once the Player Characters’ ship leaves, Mercury will nod and inform the characters that the course they are on will take them through the cometary cloud of the system because they need the raw materials to construct more plates and to ‘restock our central star with hydrogen’. To have Mercury explain this further will require a Reason + Command Task with a Difficulty of 2. He will explain that they use their central star not only as a power source that will last trillions of years, with re-engineering, but also as a manufacturing center for elements heavier than hydrogen. A Character with a Focus of Astronavigation (or a similar focus) may make a Reason + Conn Task with a Difficulty of 1 to know of a star system in the local area with no life-bearing worlds that could provide the same resources and avoid busy transit routes.

Even with this information, Mercury will prove to not understand the concern of the characters. Disrupting the Oort Cloud seems such a minor issue, and Mercury will state that the starship they arrived in has the ability to generate graviton beams, so any comets that may be accidently sent towards the inhabited planet could be deflected by starships. He will argue that their sensors could show any objects that may impact their worlds with enough lead time to evacuate people from near the impact sites, and the Federation clearly has the technology to terraform worlds and repair any damage that may occur. Clearly Mercury sees these problems on a different scale, not seeing accidents or mistakes that could occur, nor seeing the amount of effort such tasks would take. The Enlightened clearly have a detached perspective on the universe even if they do care about intelligent life and have compassion.

The solution to the problem of scale and perspective between the characters and Mercury will require humility, attempting to explain how biological beings may not see the events that will occur in the same light, nor will Starfleet be able to divert enough vessels to properly deflect all incoming cometary bodies towards Foggy Peak, and perhaps people won’t want to leave the homes in the evacuation zones that they’ve made for themselves as they have grown emotionally attached to what they have created. Regardless, convincing Mercury, and thus convincing the rest of the Enlightened, will be a difficult task. Mercury will not argue against the characters, rather he will allow them to make their arguments freely and judge them accordingly. This will require the Players to accomplish a Linear Challenge with two Key Tasks. The first Key Task is to convince Mercury of the ethics of the Brain’s course, and why it will cause harm. This will require a successful Reason (or Presence) + Command Task with a Difficulty of 2. Once Mercury is convinced of the moral argument, the Enlightened and Mercury will need to be convinced there is an alternative that does not cause them problems and is practical. This will require a Reason (or Presence) + Conn (or Command) Task with a Difficulty of 3. The Reason + Conn Task represents an approach that is more logical and provides information about other nearby star systems that can provide the materials they need. The Presence + Command Task represents a more emotional or moral argument that focuses on how the Enlightened are in a position of being protectors and stewards of intelligent life, and should take any means to preserve it and let it thrive. When successful Mercury will hold up his hand and inform the characters that the Enlightened of heard and deliberated amongst themselves enough and that he has recommended that they change course. If the characters are able to go through the Linear Challenge without any Complications, Mercury will do the same as described above, but also apologize to the characters for seeming inconsiderate, and that the Enlightened perhaps have once again become stagnant in their thinking about the outside universe and that it was a good thing to have encountered the Federation when they had.
Mercury will ask to exchange cultural information, such as music, fiction, artwork (both holographic, patterns for sculptures, paintings, etc.). He will inform the characters that the Enlightened spend much of their time in the pursuit of beauty when not observing and attempting to understand the outside universe. If the characters agree, Mercury will ask for access to the ship’s main computer and upload the same amount of cultural items as the Enlightened take from the main computer’s databases. If the characters volunteer one type of art that he did not mention, the culinary arts, Mercury will be fascinated. The Enlightened have not needed to eat for sustenance since they became creatures of information. The idea of eating food will make him far more animated and excited, wanting to sample food. This is, of course, impossible for him as he has no gastrointestinal tract.

If the characters have been very polite and have been forthcoming with answering any questions Mercury has, he may at the Gamemaster’s discretion, download a small portion of his personality into the main computer of the character’s starship as he wishes to experience eating (and other cultural activities) and then report back to his people on this experience. If this occurs, the characters won’t find out about this semi-independent program until the beginning of their next adventure where Mercury may appear during holodeck programs that involve food and alcoholic drinks. His voice may also manifest itself from replicators when characters ask for certain food items, giving commentary on if he has “tasted” the food, and what he thinks of it. In rare circumstances he may live up to the trickster aspect of his name and provide a ‘better’ selection of foodstuffs than the

Mercury (Limited Copy of Original), Enlightened Data-Based Lifeform [Notable NPC]

**TRAITS:** Enlightened, Curious

**VALUE:** Enjoying New Experiences and Making Others do the Same

**ATTRIBUTES**

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**DISCIPLINES**

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**FOCUSES:** Computer Technologies, Art and Literature

**STRESS:** 10  **RESISTANCE:** 0

**ATTACKS:** None

**SPECIAL RULES:**

- **SENTIENT CODE.** Any attempt to remove Mercury from the main computer is exceedingly difficult and all Tasks to do so have their Difficulty increased by 2. Furthermore, attempts to disrupt the computer of a vessel hosting Mercury, or change its code has the Difficulty and Complication Range of the Task increased by 1 as Mercury acts as a counter-measure to protect his ‘home’.

**Mercury in Play:** Mercury is the name given by the Universal Translator to a being encountered by Starfleet in the Enlightened’s Matryoshka Brain. Only moments old when first encountered by the Federation, Mercury had actually spent decades of subjective time inside the Enlightened’s simulated universe preparing as best it could for making First Contact. In person, when met at the Matryoshka Brain, Mercury is very bland in both personality and appearance. Mercury appears at first as a nude two-and-a-half meter tall genderless humanoid. His skin is pale, almost translucent, and he is hairless. He refers to himself as a male based on the origins of his name in human mythology, but otherwise has nothing that would make him male or female. This is the same appearance he will have when he begins appearing on a vessel’s holodeck. He will behave strangely until he is used to observing humanoid interactions with each other, and then he may begin ‘wearing’ clothes and smiling. Mercury’s attitude is generally playful and excited to be experiencing new things. As a self-aware lifeform that is comprised of data patterns, Mercury can pop up in any holodeck program uninvited, and even appear on console screens and speak over the intercom. Any problems he causes are generally limited to replicators and food items, changing selections for characters and giving them ‘interesting’ choices he feels they may enjoy.

He will slowly develop as a person, attempting to even interact in holodeck programs that have nothing to do with food and drink, asking to accompany characters on adventures to experience more of the universe. Given time, Mercury may begin appearing in the sickbay to observe medical procedures. The code that comprises Mercury is nearly impossible to dislodge from the computer systems of the starship, and Mercury will generally obey orders from crew members to leave them alone if asked, knowing that his existence relies on their good graces. The copy of Mercury that is in the computer core had all of the knowledge of advanced technology removed from his memories, and any other information that may change the development of the Federation. The only knowledge he retains is limited to art, literature, and how to contact the rest of the Enlightened when his time observing the Federation is complete.
character ordered. This program would be slightly annoying at worst, but could also provide unique insights into ancient cultures of the Alpha and Beta Quadrants and acting like a limited Supporting Character that can only manifest himself on board the ship in the sickbay, in a holodeck program, or on a display screen.

Once the characters have had the Enlightened change course, have shared cultural information, and generally finished with discussions, Mercury will take his leave as he explains his body was not made for long term survival and some systems are beginning to fail. He will inform the characters that now that the Federation has discovered them that they please leave them to their wanderings and that if the Enlightened wish to contact the Federation again, they will hear from them. It's a polite way of saying, 'Don't call us, we'll call you.' He will dematerialize in the same way he appeared after informing the characters that the object they are on will begin taking itself apart soon as it is an unnecessary drain on power and resources now that discussions are complete. It is here that Mercury will download himself into the ships computer.

Leaving the subspace bubble around the Brain is much like the arrival. As the character’s starship gets closer to the edge of the effect, more and more stars become visible, ramping up frequency from deep reds to a more standard range of spectrums before the Brain finally disappears behind them and the ship’s sensors say they are now in standard space-time and can form a warp field. However long the characters spent inside the Brain’s subspace field, only a few hundredths of a second has passed in the outside universe. The ship’s computer will throw a few alerts across the conn panels as the ship’s clock is updated before the ship continues on its journey, almost as if an interruption never happened.

**Gamemaster Advice:** As stated in the main text of the Act, Mercury, and the Enlightened as a whole, are kind and compassionate. No test will end with actual harm coming to the characters. Any tests you may wish to put forth to the Players in addition to the ones given in this mission should always be mental puzzle-solving type tests to prove that the characters are sentient, or physical tests that may seem like a threat but are actually tests of compassion, empathy, or giving. With ideas that are so beyond our grasp, and an NPC that is as alien as anything we’ve seen on screen, there are most likely going to be misunderstandings by the Players that may have them asking strange questions or trying very odd approaches to problems. Don’t sweat it: make sure you ask your Players lots of questions about why they are doing what they are if there is any confusion, it should help clear things up!
As stated in Act 3, it is possible for Mercury to become a ‘ghost in the machine’ within the main computer of the Player Characters’ starship. Most starship classes can also host the complex AI-like personality of the curious Enlightened as long as it has a holodeck and an isolinear computer core. Mercury can be used by the Gamemaster as a way to introduce Complications from failed Tasks regarding the ship’s computer systems (as one example) or for Players to use Momentum to gain insight into long-dead civilizations the Enlightened may have encountered.

Attempts to locate the Brain by the characters or by other vessels of Starfleet will fail as the Enlightened will subtly warp space around them to make starships unable to drop out of warp inside the bubble. Even sublight attempts will see the vessels gently moved aside. Sensors of all types are as unable to pinpoint them as before and they have effectively disappeared. As time passes, the Foggy Peak system does not see the passage of the Brain and a large swath of the cometary cloud of system SE-B-M55-8766133 will disappear on Stardate 50890.2. This will be the last evidence of the existence of the Enlightened’s Brain for the foreseeable future.

Gamemasters may be able to use the ideas presented in this mission to jump off into new and interesting adventures for their Players to explore.

- The existence of the Matryoshka Brain and the Enlightened’s Dyson Sphere may not be the only megastuctures in or near Federation space. Perhaps other Brains besides the one encountered turned around and came back to the Milky Way and the beings inside may have developed down very different directions.

- Is there evidence of the passage of other Brains through the Milky Way? Did it leave devastation in its wake or perhaps is there evidence of interference in local cultures? Have other powerful beings encountered by Starfleet crews in the past been members of other Brains such as the encounter with Apollo by Enterprise in 2267 or the development of incredible powers by humans nearing the edge of the Orion Spur?

- Along with the development of sentience in the Mark 1 EMH program, and the construction of the positronic brain and Data, the existence of Mercury is another piece of evidence to suggest the reality of artificial intelligent life. Adventures could revolve around the rights of beings existing in computer networks, or perhaps to begin the debate on the ethics surrounding the question of uploading minds of intelligent beings. Many transhuman concepts can be explored in this way, including voluntary cybernetic upgrades, duplication of consciousness, and even the possibility for the continuation of life after the death of the biological body.
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