



Coming of Age

by

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There are too few worlds like this one. It is green with forests that span entire continents, blue with massive, temperamental oceans, and white with clouds and polar sea ice. It's one in that class of worlds that, from time to time, is contested with violence and fervor before the contestants pass into history and are forgotten. Sometimes, following these contests, the planet needs time, five hundred or a thousand years, perhaps more, to heal the injuries it suffered at the hands, or paws, or tentacles, or other, of those that loved it. An age may pass, with luck, before the cycle repeats. Given time the planet repairs itself and returns to blue and green and white.

In a lull between these bouts of violent love, in one of the forests of green, there is a glade with a pool. The pool is fed by a lively brook that delivers water into the pool and takes away the unneeded water and detritus. This glade and this pool are each one of hundreds of thousands, if not millions, of glades and pools upon this planet. But this particular pool is unique. Drain the pool and you will find nothing out of the ordinary; green plants and flopping fish-like animals, squirmers and wigglers. Scan the pool with every sort of device you can devise and you will not learn its secret. Sit next to the pool, day and night, swim in it by sunlight and starlight, and you will not learn its secret. Talk to the pool, listen to the pool, throw rocks in and pull dead limbs out, you will remain in abject ignorance.

In the pool, living and growing, learning and missing some lessons entirely, unique and utterly alone, though not lonely, there is a child.

Like any child it plays, explores, laughs, investigates, sleeps, eats. Of course, it does not suckle, or pull on its mother's hair, or cry to have its diaper changed. Or take its first wobbly step. That's what comes of not having legs or feet or hands. The child does swim, if moving through a body of liquid water must be called swimming. But since there is no undulating motion, no side to side movement of torso, no flipping of flippers, to say that it swims would be to accept the word 'swimming' with little specificity.

The pool the child swims in is not large. A local land inhabitant, herbivorous and fairly large, could leap the pool if it had a mind to though I suspect several of its back feet would get wet upon

landing. Come the winter the pool freezes over but not so deep as to threaten its inhabitants, corporeal and other.

The child finds ice to be most peculiar, and vexing, and boring.

Over the winter the only water that comes to the pool is from springs upstream.

Springs are made up of water that had been frightened and retreated underground, sometimes for centuries, before it works up the courage to come back to the surface and rejoin its brethren in the ancient cycle. The information that can be gleaned from the old water is old news. There's not much happening in the ground deep beneath the valley; boring.

In the spring the ice melts, the snow that is upon the land melts, and warmth again reigns. Raindrops fall from tall, tempestuous clouds striking trees and rocks, birds, insects, plants and plant and meat eaters. And with each collision of raindrop and something a tiny bit of information about the world is imparted to the raindrop. Each little bit of water, with its datum, follows the demands of gravity and lowers itself to meet up with others of its kind. Coming together the raindrops agree to be a rivulet and begin a journey to the closest stream. Happier than it expected to be each raindrop joyfully skips and leaps as it joins the parade to a greater and greater gathering of its kind. All those drips and drops that fell within the watershed of the child's pool race each other down the ravines between the hills. Stopping to rest, the streams disassociate for a time in prior pools and ponds, before re-gathering at the outlets to race again for the pool with the secret.

Some raindrops become enamored of the sun and play at the surface until they warm to the idea of returning to the sky. In vaporous ecstasy bits of water rise up and, in so doing, lose the datum acquired upon a previous descent. Ever fickle, the water's affections for the sky cool, the raindrops return to the planet's surface and reacquire a bit of information for the child.

In the pool with the secret the child awaits the newly arriving water with its torrents of data. Gathered, sifted, collated, assessed and reviewed, all the millions of bits of data become information and the world above the pool comes together in the child's mind. High in the hills, above the tree line,

there are thin and patchy lichens clinging precariously to life on barren rock. Lower down, on the slopes and in the valleys, animals and plants of many sizes and metabolisms flourish. From the information stream the child learns of the competitions that play out each moment of the day; life never really sleeps. In some cases the attack of life on life progresses in a slow, non-masticating way; the violence is barely noticeable. In other circumstances the transition from alive to not is sudden, violent and colorful. From the peaks of the hills, into the valleys of denser forest, beneath the forest floor and beneath the waters that have gathered, the process of living and dying is unending. Through all the killing, maiming, bleeding, oozing, flapping, running, jumping, snarling and braying, there is a specific missing item that makes it all acceptable: animosity.

The child accepts what it learns of the world, from the raindrops, because all of that unpleasantness is how life operates. The carnivore does not hate its prey, although, I suppose it could be argued that the prey is quite offended by the hunter. Of fear there is a sufficiency. But the nasty emotions: hate, envy, jealousy, guilt, do not play a role.

There are lessons here for the child, lessons on the operation of life, and, by extension, a measurable part of the universe at large. But the child is not yet aware of the larger universe. It has reasoned that although it can know nearly everything about the world above its pool, within the watershed, there must be much more it cannot know of. The water flowing out of its pool goes somewhere. Logically it goes on to other pools, and collects with other streams into larger flows, until all the water comes together. And as there is no reason to believe that there is anything special, or extraordinary, about this watershed, then all the unknown places must be just like this place. And, if there be other pools, logically then, there are others like itself, just like itself. And if all the others are just like it is, why then, there is no reason to meet them. The child has it all worked out. The child is happy.

Seasons become years, years become centuries, the centuries gather, and the child is happy. On three occasions the child ventures upstream or down, some short ways, as its current pool becomes

shallow with the collection of silt and plant matter. It does not need to travel far to find another pool comfortably like the last. The universe of the watershed changes, becomes drier, wetter, warmer, colder; all the while the hills come slowly down.

Finally the hills have come down sufficiently that a stream that once followed down a different watershed breaks through to the child's world. At first the terrific quantities of new information is exhilarating but, ultimately, only confirms what the child has known all along. All of the universe is the same, essentially.

But this particular change is more pronounced, and more profound, than the child can know. The valley that is the universe is changing, moving, heaving, settling, rearranging, eroding; and as the land moves, some of it moving downhill, so too the water moves.

On the far side of this lovely little planet there has been an upwelling of cold water from deep in the ocean, brought on by a powerful cyclonic storm. With only its own circular logic to guide it the storm hesitated offshore. For a week it dithered, uncertain of its future should it venture onto the land. And for a week a colossal storm surge piled up atop a shallow sea shelf that resides at the coast. The weight of this body of water drove a river of warm water down and over the shelf and into the deep. Moving out across the bottom of the ocean this sea of warm water, moving with the momentum of the storm that spawned it, collides with a cold, normally calm, layer of very cold water. The result of that collision is the expelling of the cold, deep sea water into an upward column, and when that cold water reaches the surface of the ocean the winds blowing across the ocean cool. This cooler, and therefore drier, wind moves on and begins a shift in weather patterns that affects all of our lovely little world.

It had been a very warm and wet summer in the child's valley. Rains are frequent, sometimes gentle, sometimes fierce, but seemingly always present. Waterways run full and fast bringing continuous data flows to the child. Bits of grass, leaves, twigs, bugs, all are carried with the raindrops down the valley walls to the stream. Nearly all the water flows down to the stream. The ground in the valley and on the slopes above have soaked up what water they can; deeper soil that normally has only

a few percent of moisture is now saturated and becoming soggy, and heavy. Gravity, its nature being unalterable, seizes the opportunity.

A hillside tears free of its parent and slides down amidst a great rumble of sound and a jumble of trees, rocks, brush, animals and hard and soft shelled crawlers.. Reaching the valley floor it piles upon itself and dams the stream that feeds the pool that is the home of the child. By the next day, sunny and dry, the flow of water to the pool has slowed to a trickle. Some rain, caught in the grasses, leaves, and the bark of trees, still responds to the urge to reach the ground and make its way down the valley. This march of droplets also slows and by the next day the flow into the pool is negligible.

In the pool the child is delighted. The slurry that marked the impending cessation of flow contains the whole story of the slide and its damming of the stream. This sort of thing has happened previously, though not quite on the current scale, so the child knows that eventually the pond, or lake, that is even now forming further up the valley will fill and the flow will resume. When flow begins again there will be so much it will tell the child; for the valley has changed, as I mentioned, profoundly.

From ocean storm to ocean current, from wind to rain, all that the child thought it knew of the universe will prove to be, not wrong, but...incomplete.

Far up the valley, exposed for the first time in thousands of years, a part of history is drying in the warm sun. Made-things, exposed by the slide, are feeling the warmth and energy of the sun. They are things that respond to that energy and can convert and store that energy. And some of those made-things were made to be inimical to all but their makers.

The rains return and the made-things, briefly dry, become the object of the rain's curiosity. Over every surface, round each corner, into each small crevice, the little raindrops search out all there is to be known of the made-things. Temperature and texture, color and size, shape and material, all is noted by the diligent raindrops.

Some of the made-things are damaged. The damage comes in many sizes and by many routes. Some injuries to the made-things were done long ago by other made-things, some injuries were

incurred when the hillside rushed to acquaint itself with the valley floor. All the injuries, small and not so small, ancient and recent, allow the raindrops to enter. Within some made-things the sun's energy that was converted and stored takes exception to the presence of the rain and, in a bright flash, leaps free. Unperturbed by the insult the raindrops continue their falling, coalescing, rushing ways.

Satisfied by all the falling and coalescing the new lake is ready to allow the stream to resume its interrupted career. Water flows over the top of the dam of jammed debris and hurries down the valley. The child is waiting.

While awaiting the return of data laden water the child has reasoned, in great detail, the sequence of events as they must have played out upstream. It has worked out how the rain soaks the ground and puts all the smallest parts of the soil into suspension. And how an imperceptible something sets the whole hillside into motion. It has noted that for nearly two years the weather has been wetter, warmer, more unsettled than can be remembered. The child cannot learn from the raindrops of the mighty upwelling in the ocean across the world. The rain that falls in the valley of the child knows nothing of that.

Tiny vibrations in the ground herald the approaching stream and the child moves to the inlet, eager to see if reasoned speculation and fact align. The muddy, leaf thick, joyous, chuckling, burbling flow splashes into the pool and the data it carries is corralled and tamed.

In seconds the universe as the child has known it for thousands of years is rent.

The child is stunned to learn that in the valley, perched on the hillside, there are made-things. In some distant past creatures unknown, of intellect and capacity, with the ability to manipulate the universe did so. Some things, at some time, had melded metals to clay, alloyed bits of the universe that should not be joined, heated and formed complex shapes, and then attached together the results. These made-things were given the capacity to sense and categorize the components of their environment. If some parts of the environment did not align with provided parameters the made-things had the capacity to release stored energy in a directed and destructive manner against the disallowed thing.

All this the raindrops that had flowed over and into the made things relay to the child.

The child recoils, stunned by the discovery. For thousands of years the child has deciphered all there was to know of its valley, and by extension, the universe. In all those years and reasonings the concept of made-things did not once occur to the child. It retreats in confusion, back to a calm area where the new information has not yet intruded; everything and all the little parts of everything that it thought it had reasoned and known has come apart. Within the complexities of the intricacies of the made-things is the surety of an immense number of thinking beings that were, perhaps *are*, not like the child. Only great numbers of beings, a civilization, could manage the tens of millions of tiny steps required to produce the made-things. Perhaps the child's whole universe had once teemed with the somethings that made other things. And the other somethings must have been vastly different from the child, more like the corporeal creatures that visited the pool; capable of picking up, changing, remodeling and re-assigning purpose.

Yes, the child reasons, they had to be corporeal and like all such life they had lived and then died. The makers evolved as those of that type do, built their objects, lived out their span and now are gone. Only the more resistant corpses of the made-things remained. Like the small hard-shelled and many-legged creatures that make complex homes for themselves, the makers of these newly found objects were acting purely on instinct with no complex reasoning like the child employs. That they were a bit more developed, and the things that they made a bit more complex, did not change their basic nature. And so the child has reasoned away the fear and confusion and is ready to study the details.

Back into the body of the pool the child begins again absorbing the data brought by the rain. And again it recoils for now it has learned the purpose and nature of the made-things.

Through all the centuries the child has known of death for life, the repeating cycle and the slow changes that accompany it; each generation contributing some tiny increment of improvement. Many times have the raindrops found fossils that had come to the surface. It took the child some time to

puzzle out the nature of fossils, how things that looked somewhat like the corporeal beings could be formed of rock and mineral. That had been an exciting time; when the universe of the valley still held surprises. Eventually the nature of fossils and their fit within the puzzle of corporeal life and evolution was worked out, though. All things that lived had to kill in one form or another in order to live, reproduce and evolve.

The child now realizes that it had not sufficiently explored the possible paths that evolution might take; that some beings might come into the universe that did not fit the standard pattern of death for life. The child has never considered that some things might consider the deaths of others as the goal itself. And it is terrifying to realize that such could exist.

There are made-things, possibly still active, on the hillside of the child's universe, whose only purpose was to destroy. Some of the made-things' purpose was to seek and kill any life that their makers disapproved of. Not for food, not to protect offspring, or a nest, or a dwelling cave, or a thousand chambered mud construction...but to kill other living things purely to remove them from the maker's universe. A new concept entered the child's mind: murder.

Numbed beyond reasoning the child flees to the outlet of the pool. With the leading edge of the flow the child races down the stream bed to escape the horrors it now knows may be looking down, and planning the child's death, for surely the child is not like the makers of made-things. In the panic of the moment distance seems the only safe course.

Down the narrow channel, mixed in with the leaves, sticks, pebbles, insects and mud, the child and its splashing mount reach the next pool. This pool is much larger, a small lake, fed by springs all the year it has a constant outflow. Though the water of the lake is colder, clearer, teeming with many more diverse life forms, the child takes no notice.

In all the dozens of centuries the child has never explored the valley, content to let the rain bring the valley to it. Truth be told, the child is not terribly curious other than on the very small scale of its immediate environment. Its earliest reasonings made clear that all that could be known would,

eventually, come by way of the brook that fed the pool. Content to lie quietly in the cool darkness of the water the child has never so much as broken the surface to explore the air above the pool. The very thought of breaking free of the water could not be thought. Now, many thoughts that had never been thought were driving it to new behaviors.

Frantically charging ahead of the water entering the lake the child escaped the terrible information that has set its course. In the innocent waters of the lake the child finally slows its flight and rests. But it knows that the horrible knowledge that it has ridden here is already tainting the lake and will soon overwhelm its purity. The child follows the shoreline until it finds the outlet and begins anew its trip downstream. It is now farther into the unknown than it has ever been.

This stream leaving the lake, fed by the numerous springs, is larger and moves faster. Encountering an area of exposed, broken and jumbled rocks the stream accelerates and the child stays with it. Following the faster currents, easily evading the rocks and reverse flow eddies, the flight of the child goes on. Through the remainder of the day and into darkness it jostles with the water down the valley floor. Eventually, the ground levels and the stream's race slows, but not that of the child. It pushes on, pursued by thoughts of senseless murder for the lust of dominance. And another new-formed concept bubbles to the surface; fear and hate of all that is different.

Hours of dark flight later the child and the stream reach another lake, smaller and shallower than the last. This lake is artificial of a sort, created when local creatures dammed the stream where it narrows. Here the child rests, more for its mind than what it has for a body. Concentrating on the builders of the dam, and their constructs, the child can refresh, in a very small amount, its wonder and delight at the normal workings of life. Here in this small lake is how the universe should operate. Not simple, but ordered over ages of experiments carried out by the opponents of entropy, corporeal life moves about the business of being alive. For several hours the child explores the lake, content for a short time to live in a previous universe.

The respite is cut short when the child's explorations bring it back in contact with the water

flowing in from above. In the waxing light of a cloudless dawn, the thunderstorms having run their noisy, flashing course, the child finds a small spillway at the dam and follows it over and down.

In only a short time the child senses the low susurrus of a great deal of water in motion. Slow, ponderous vibrations move through the ground and into the water of the stream. The child has reached a large river. The stream that has flowed down the valley universe is a nearly insignificant addition to the volume of the river. Racing ahead to explore the vastness of the river the child dashes into the greater flow.

And the terrors return. The river is suffused with information on thousands of made-things. From hundreds of streams, rivulets, brooks and springs the raindrops have brought news of made-things in vast abundance. In adjacent valleys and atop ridge lines, perched on cliffs natural and constructed, the made-things hunker throughout; persisting long after their makers have passed or moved on. The river tells the child of made-things that are alive, of a sort; of made-things that plot and plan, with contingencies and alternates and Plans B and C and beyond.

In all the information brought by all the trillions of raindrops there is no slightest mention of another like the child. The child was wrong. There are no others like itself in other small pools in other valleys. The child learns another new concept: loneliness. There is only the child, the corporeal life, and the made-things.

And the made-things harbor twisted thoughts.

It is well for our lovely little planet that, of all the made-things, not one has the ability to do more than plot and plan. It is well indeed. If even one could move about and modify, combine, attach, then that one would make more of itself and they would make more. And the murder for dominance would begin anew.

Beyond reason, nearly beyond thought altogether, the child does a thing it has not done in all the thousands of years it has lived in its little pools in its tiny universe: It leaves the water. With no thought but to escape the onslaught of hate the raindrops have learned from the made-things, the child launches

straight up and out of the river.

Its first sense is a flood of relief. No longer engulfed by the synthetic emotions of the made things the child hangs above the river. Without thought to what may be next, or how it stays suspended, the child simply stops. A flood of new information is in the air and the child eagerly samples it all. Here its senses reach out further than ever they did, identifying individual trees, insects, birds, even the small clouds above, in ways it never had while in the water. In the river flowing below the child senses the variety of all that is in the water; fish, clams, hard-shelled crawlers, sticks and leaves and the rocks on the bottom. It also senses the malevolence of the made-things suffusing the water, but that is muted and easily ignored.

Had you been on the river bank just then, looking quite accidentally at the specific spot where the child is, you might catch a very faint glimmer of light. Of course, you might as easily be distracted by a passing insect and miss it altogether.

For the first time in all of its time the child is feeling the sun unfiltered by the waters of its home. High energy particles pour down upon and into the child. Some small bits of that energy are captured by the child, without conscious volition, and catalyze processes that could not occur within the stunted energy environment of the pool. Floating above the river, unaware that it is rising up in a direct line with the sun, the child does realize that it feels a new something. At first it has no name for the something; perhaps it is warmth, or comfort, maybe security, maybe a little of all three. The child lifts slowly higher, learning to incorporate the new something, recognizing the stirrings of that newness in itself. Finally it comes to the child what it is feeling...growth.

Now there is a truly perceptible bit of light above the river, just where the green and blue dance together with the wind. Invisible to corporeal eyes the child had spread wings reaching out the width of the river to capture even more of the sun's gift. Brighter the child glows until it is a pale blue star come out in the day, rising higher, always toward the sun, now clearing the tops of the nearby hills.

There are things, made-things, on this planet that watch ceaselessly for pale blue children

floating in the skies. That which watches does not care that the child is harmless; armed with nothing more than curiosity and a sense of delight. The made-thing watches, tabulates, categorizes and prepares. For the first time in forty-seven centuries the watcher closes unmoving electronic switches. Energy that has been stored in vast underground tori, racing endlessly in unresisted circles, is shunted to conduits that take it on to other devices that change and modify it. Altered in its very nature the energy moves on. On a mountain-side miles away, within caverns with glassy floors and walls, there is movement. With a great gnashing of corroded teeth gears rotate, doors swing open to expose made-things which move forward to fill the openings. Rotating and depressing on frictionless magnetic bearings the made-things align themselves on the pale blue child. Decisions are finalized and more contacts close. Within the made-things the energy surges...falters...stops.

Times' operative, entropy, has invaded even the makings of the obsessed makers on this little green and blue and white planet.

With evanescent wings now stretching miles out to either side, the child rises ever higher, passing above the few puffs of white cloud, unaware of the failed violence so near. Soon the river below is a mostly brown smear meandering through mostly green. The mouth of the river becomes visible near the horizon. The brown smear spreads out and thins until it becomes the blue of the ocean. The child rises higher, passing the heights of mountains, surpassing the billowing storm clouds, then leaves the atmosphere and enters empty space..

Here the strength of the sun increases, the flood of charged particles dwarfs the flood of water that is now so far below, and the wings are folded in to manage the rate of the child's growth. As the child grows the amount of energy it can take in increases. Still without willing it the child is moving towards the sun, its speed increasing with each second as it pushes harder and harder against the gravity of the little planet. Soon the gravity of the sun surpasses the gravity of the planet and the child begins to pull rather than push. Within a few hours it reaches the orbit of the next planet in and there it stops. Something is happening within the child. A critical point has been reached as the energy pours in.

Blazing like a tiny sun, the child has taken in so much energy it has effected a metamorphosis that has been thousands of years delayed.

By staying within the pools, beneath the surface, the being we know as the child has lived in ignorance of its true nature. Still, it is best that the child did linger so long, for if it had risen earlier it may be that the made-things on the planet would have not yet been rendered impotent.

The sphere of pale blue light, now visible from the planet's surface but for the overwhelming sun, condenses, shrinking in volume and growing in internal complexities.

Minute energies flow in prescribed ways within the child, pathways of confluence and divergence connect and reconnect, complexity increases. Information coded within the child, but unavailable until the necessary energy states are achieved, blossoms into brand new memories. The rush of memories is nearly overwhelming but one memory comes to the fore, clear and wonderful; the way home is *there*.

The child dies a sweet death of knowledge. No-longer-a-child is born.

Turning in slow revolutions, motionless relative to the sun, no-longer-a-child turns down the intensity of its light and pulls in the collector wings. With all of the recently remembered to be sorted and understood it settles into a semi-somnambulant state. For nine days, as measured on the nearby world of green, blue, and white, it turns inward, reflecting on the new understanding of the universe and its own place therein. No-longer-a-child also finds memories, left by its parents, of the xenophobic makers-of-things and the war they brought to dozens of star systems. No-longer-a-child remembers that the small world where it lived for so long is only one of many that had been militarized and mutilated, and that the makers may not have gone from the galaxy altogether. And that they are not the only dangers the universe contains. Care must be taken.

Back to the small planet it moves, extending its senses to peer down upon the installations that are trying so diligently to find a way to destroy it. From just above the atmosphere no-longer-a-child studies the hundreds of constructs of war and finds that they are no danger. Most are cold and silent,

energies dissipated, corroding away back to earth. Some few maintain power but can do nothing with it, not even call for help.

Let time and entropy continue their good works.

No-longer-a-child turns away, pushes hard against the lovely, little planet, and begins the journey home.