

Appendix 6

Transhuman Terminology

In studying the events prior to and after the Reassortment Atmospheric Anomaly, the major zones of Earth (including the surface, Polemon, Beimeni, Middle, and Lower Level zones), and the Evolutionary War of 308–368 AR, many unfamiliar terms arise. It's admirable for the studious and dedicated to try to better understand the world's history and future. Hence, the glossary that follows.

A

ABSOLUTE ZERO: 0 K on the Kelvin scale, which is a thermodynamic (absolute) temperature scale, and -273.15 degrees Celsius on the Celsius scale.

AFTER REASSORTMENT: the terms After Reassortment (AR or A.R.) and Before Reassortment (BR or B.R.) are used to label or number years in the Livellan calendar. This calendar era is based on the traditionally recognized year of the Reassortment Atmospheric Anomaly, with AR counting the years from the start of this epoch and BR denoting years before the start of the era. (*See Livellan calendar.*)

AGE OF MASIMOVIAN, THE: began with the election of Atticus Masimovian as the first chancellor of a newly created commonwealth he called Beimeni in 168 AR.

ANSIBLE: also called the *ansible communicator* or the *ansible*; enables instantaneous interstellar communication through the ZPF; functional only on celestial bodies with weak or no magnetic fields. (*See zeropoint field.*)

ARTEMIS SQUARE: the northern square in Beimeni City that contains three amphitheaters.

ASTEROID MINING: the extraction of raw materials from asteroids and minor planets.

ATHANASIA: the gene therapies designed to give transhumans a theoretically infinite life span.

ATHANASIA POOL: (*See Fountain Square.*)

ATHANASIA-QUALIFIED: included in classified dossiers in Marstone's Database; an indication of whether or not a citizen is eligible for entry to Fountain Square. Service to the commonwealth generally assures access; the exceptions are for (1) citizens considered a threat to peace; (2) members of the Great Court; (3) Couriers of the Chancellor; (4) Harpoon candidates; (5) the deceased; and (6) Lower Level exiles. (*See Fountain Square.*)

ATHANASIA'S KISS: (*See Fountain Square.*)

AUTOCRAT, THE: the highest political and military office of the Western Hegemony. (*See Western Hegemony.*)

B

BEFORE REASSORTMENT: (*See After Reassortment.*)

BEIMENI ARISTOCRAT: an appointed position as either overseer of a district or ward within a village or city, or as a Harpoon developer. (*See House of Development.*)

BEIMENI CITY: also called the *great city* or the *capital*; the capital of Phanes Territory (founded and constructed in 197 AR) and the second capital city of the Great Commonwealth of Beimeni. The first capital city was Livelle City, Natura Territory (founded in 168 AR and constructed in 170 AR).

BEIMENI CONTRACT EXCHANGE: a market in which securities are bought and sold.

BEIMENI POLEMON: also called the BP; the colloquial moniker given to the Liberation Front by Lady Isabelle Lutetia.

BEIMENI PRESS: the government-controlled media arm of the Burdigalian Consortium.

BEIMENI TRIUMVIRATE: the cornerstones of power in the Great Commonwealth during the Evolutionary War, including the Barão Strike Team, the Masimovian Administration, and the Liberation Front.

BEIMENI ZONE: a layer of the Earth that is, on average, between two thousand and two thousand five hundred meters deep; some parts of the commonwealth are deeper and some parts have shallower depths.

BENARI: monetary unit of the Great Commonwealth of Beimeni, delivered telepathically (via the ZPF), manually (in commonwealth cards), or physically (benari coins).

BENARI COIN: A benari coin is made of a proprietary blend of synthetic silver, gold, and platinum. They are 2.1 millimeters thick with a circumference of 8.3 centimeters and weigh 8.2 grams. They are used primarily as a means to support the shadow economy of the Great Commonwealth, which Chancellor Masimovian believes contributes to law and order in the underground. They also provide a means to alter the money supply physically—all benari currency is backed by the RDD's supply of synthetic resources.

BIOMAT: A biomat suit is used by anyone approved for a surface excursion on Earth. The inner layers are synthetically designed at the microscopic level to mimic the Venusian surface, one of the deadliest places for life known to man. Early iterations of biomats protected against exposure to the Reassortment Strain 70 percent of the time; later iterations achieved percentages as high as 95. Breaches have never been understood.

BIOSTAR: a synism capable of synthesizing or manipulating minerals and metals via biologically mediated nuclear processes.

C

CENTRAL COMMAND: Candor Chasma on Mars is home to Central Command, Beimeni's largest extraterrestrial research site in the solar system. Vastar Alalia once suggested to Chancellor Masimovian that he begin a new colony on Mars, but the chancellor refused, wishing instead to return to the Earth's surface or travel to an Earth-like exoplanet.

CEREBRAL CORE: the domed, spherical room that contains Marstone.

CEREBRAL NETWORK: transhuman brain impulses scattered throughout the ZPF, stored within Marstone.

CHIRALITY: also called *handedness*, the aspect of a structure or property, such as the configuration of a molecule or the spin of a particle, that renders that structure or property distinguishable from its mirror image or symmetrical opposite.

COLLAPSE OF THE WAVEFUNCTION: an actual event results not by an evolving wavefunction, but by the collapse of the wavefunction by observation. For instance, a particle such as a photon doesn't exist in space-time; photons carry light in tiny packets, but they also behave like waves, which extend in all directions, forming the electromagnetic field that spans the universe. There's a probability of finding a photon anywhere in the field, but as soon as you do, the probability is no longer necessary; the act of observing has transformed the wave into a particle. That a particle can exist in an invisible state suggests that prior to the Big Bang the universe contained all possible probabilities; when the wavefunction collapses, there's a subject-object split whereby the invisible particle comes into existence; prior to the subject-object split, reality is an infinite one. (*See quantum probability.*)

COMB COVE: the strategic expedition (strike) team headquarters, which opened in 207 AR; decommissioned by Chancellor Masimovian in 273 AR.

COMMONWEALTH CARD: identification cards issued to all Beimenians upon entering development; contains the commonwealth security number; connects to the Beimenian banking system. (*See commonwealth security number.*)

COMMONWEALTH LIAISON: a chief spy in the commonwealth who acts on behalf of the Liberation Front.

COMMONWEALTH MISSION: an official mission sanctioned by the Office of the Chancellor; typically conducted by the strike teams and in agreement with the ministry, the board, and a majority vote by the strike teams.

COMMONWEALTH SECURITY NUMBER: the nine-digit identification number given to all citizens registered within Marstone's Database.

CONSORTIUM: a combination of institutions, private and/or government, designed to foster economic profitability and conversion.

CONVERSE COLLAR: the technology used by the commonwealth to suppress the transhuman connection to the ZPF.

CONVERSION: a discovery.

COUNCIL OF ECONOMIC ADVISORS: the advisory board consisting of thirty-one members who aid the chancellor in making economic decisions for the greater good of the people of the Great Commonwealth; led by a chairperson and vice chairperson.

COURIER OF THE CHANCELLOR: youths who, while mentored in houses of development, grow into transhuman adults naturally, over the course of twenty years. They serve the commonwealth in the Office of the Chancellor. A common role is to issue the Warning Communiqué. (*See* Warning Communiqué.)

CRISPR SYSTEM: also called the Clustered Regularly Interspaced Short Palindromic Repeats system; commonly used to edit genomes.

CRYO ROOM: the facility where the commonwealth stored the Livellan scientists held near absolute zero; decommissioned in 327 AR by Captain Broden Barão following the deaths of 334 scientists during a failed Regenesys procedure. (*See* Regenesys procedure.)

CRYPTOR: a diamond shard filled with a bacterium, *E. cryptor*, a DNA-based storage system. DNA, as a very stable nanomolecule, is an ideal massive storage device for long-term data archiving. Multiple uses during the Age of Masimovian, though the two most common include: by Janzers to perform crowd control in Fountain Square, and by the Liberation Front to send ciphpered messages through the underground.

D

DARK AGE, THE: the time frame from early days of the Livelle Laboratory, After Reassortment, until the inauguration of Chancellor Atticus Masimovian in 168 AR; was an age plagued by structural collapses, Reassortment scares, and chaotic descent further underground.

DEATH WAVE: the climax of the Reassortment Atmospheric Anomaly (extinction event) at the end of the Quaternary Period, which killed more than twenty-five billion transhumans.

DECISION DECREE: any edict issued by the chief justice on behalf of the Office of the Judiciary and/or the Office of the Chancellor.

DELPHI: also called Her Lady of Lux, a physical recreation of the Twin Gods of the Cosmos in a place inside Earth where the transhuman connection to the cosmos is the strongest. (*See Twin Gods of the Cosmos.*)

DEOXYRIBONUCLEIC ACID: also called DNA; composed of two strands that twist together to form a helix. Each strand consists of alternating phosphate and pentose sugar and attached on the sugar is a nitrogenous base, which can be adenine, thymine, guanine, or cytosine.

DEVELOPED LIFE: the theoretically infinite life span of a transhuman after they complete development; for instance, a candidate developed in the year 335 AR might've reached adulthood in five hundred fifty days; her life thereafter is referred to as her *developed* life.

DEVELOPER: person responsible for developing transhumans, and since 176 AR, preparing candidates for the Harpoon Exams, typically by utilizing the CRISPR system, recombinases, and the ZPF in order to alter (and improve) the transhuman genome.

DEVELOPMENT: the time from when a transhuman is born to adulthood. The timeline varied depending upon available technology and rules and regulations. For instance, Before Reassortment neither the Western nor Eastern Hegemonies allowed for pregnancy duration to fall below two hundred forty days. Nor did they allow growth acceleration to adulthood in fewer than fifteen years. Population control was the most cited reasoning for these policies. Traditional development procedures, halted by Chancellor Livelle, resumed full operation via traditional houses of development in 15 AR. Unlike Livelle city-state's leaders, Chancellor Masimovian has encouraged RDD scientists and developers to push the limits of growth acceleration and human genome enhancement. As a result, development is also the time when transhumans are improved genetically and trained in the ways of a Beimenian, including immersion in its culture, history, laws, language, government, technology, and aspirational goals. Development timelines vary depending on the house, the candidate, and available technology. Registered citizens-in-development weren't referred to as Harpoon candidates until 176 AR, with the first Harpoon Auction administered in 186 AR.

Pregnancy and Development Timelines

Birth Year	Days of Pregnancy			Days to Adulthood			Years to Adulthood			Harpoon Auction
	Low	Average	High	Low	Average	High	Low	Average	High	
15-150	240	255	270	5,475	6,023	6,570	15.00	16.50	18.00	N/A
151-175	210	225	240	5,110	5,475	5,840	14.00	15.00	16.00	N/A
176-205	180	195	210	3,650	4,015	4,380	10.00	11.00	12.00	Annual
206-225	150	165	180	2,920	3,103	3,285	8.00	8.50	9.00	Annual
226-275	120	135	150	1,825	2,190	2,555	5.00	6.00	7.00	Annual
276-305	90	105	120	1,460	1,825	2,190	4.00	5.00	6.00	Annual
306-320	60	75	90	730	913	1,095	2.00	2.50	3.00	Bi-Annual
321-335	30	45	60	365	548	730	1.00	1.50	2.00	Bi-Annual
336-355	15	30	45	183	274	365	0.50	0.75	1.00	Trimester
355-370E	8	11	15	18	27	37	0.05	0.08	0.10	Trimester

*Low and high ranges are approximations; there are exceptions.

**Data from 368 AR to 370 AR is estimated.

Source: Office of the Chancellor.

DREAM FOREST: a synthetic forest on top of Hammerton Hall.

E

EASTERN HEGEMONY: the People's Republic of China and its allies during the Second Hundred Years' War.

ELDERS, THE: skilled telepaths who detected and contained the zeropoint attack on Livelle Laboratory at the end of the Second Hundred Years' War, but not before the data regarding the Reassortment Strain was destroyed. They were also the first transhumans to conclude no one outside Livelle Laboratory had survived the Reassortment Atmospheric Anomaly. Additionally, the Elders helped Noriel Livelle, the first chancellor of the Livelle city-state, create the strategic expedition (strike) teams of the underground. Their order was disbanded by Chancellor Atticus Masimovian in 168 AR.

ETERNAL PARTNER: a husband or wife, coined during the Age of Masimovian; a legal bond between transhumans of any sex; surnames remain the same. A misnomer given that (1) transhumans die from several causes, including suffocation (owing to structural collapses), starvation (primarily in the lesser territories), and Reassortment exposure; and (2) divorce isn't uncommon. (*See* lesser territories.)

EVOLUTIONARY WAR: sometimes called a forever war; the multidecade struggle between the Great Commonwealth of Beimeni and the Liberation Front.

EXILE: refers to a former citizen of the Great Commonwealth of Beimeni who lives in the Lower Level.

EXOPLANET: a planet that orbits a star outside the solar system.

EXOTIC MATTER: mass/energy that violates the weak energy condition, which states that all observers in space-time must see the local energy density (the energy per unit volume) to be nonnegative; has a repulsive gravitational effect on ordinary matter; makes possible schemes for faster-than-light (FTL) travel.

EXTREMOPHILE: an organism tolerant to environmental extremes and that has evolved to grow optimally under one or several extreme conditions.

F

FARINO PRISON: the commonwealth's primary holding area for enemies of the state, and other equally dangerous criminals in the underground. As of 367 AR, there have been fifty-seven escape attempts without success.

FEVER, THE: the method to enhance the transhuman genome used during the Dark Age and the beginning of the Age of Masimovian. Infection from *E. evolution* led to a raised temperature, sometimes in excess of 60 degrees centigrade, its primary symptom. Other symptoms include muscle aches, tremors, runny nose, nausea, hallucinations, and in extreme cases, organ failure and death.

FIRST AERA, THE: the moniker given to the woman born Aerith Lazarus. She was the last descendant of the Lazarus family and the first woman to complete the striker training program. Government records suggest she perished during an escape from quarantine in the City of Eternal Darkness. (*See* strike team aera.)

FORMATION DOCUMENT OF THE UNDERGROUND: also called the Formation; the historical constitution written by the founders of the Livelle city-state after the fall of humanity on the Earth's surface.

FOUNDERS, THE: scientists bunkered in Livelle Laboratory who survived the Death Wave and wrote the Formation document to govern the Livelle city-state, including the portion of the laboratory surrounded by a village. The founders included: Noriel Livelle, Ruslan Masimovian, Gayle Rupel, Ula Decca, Oceana Variscan, Qays Thuddan, Marc Lazarus, Aquarius Nexireнна, Zelimir Marsellessa, Cael Phanes, and Pisces Lochkafka, among others.

FOUNTAIN OF YOUTH: (*See* Fountain Square.)

FOUNTAIN SQUARE: the southern square in Beimeni City; contains the Athanasia Pool, Fountain Temple, and Fountain of Youth. All architecture in the square is designed to deliver the synthetic organisms that reverse the effects of aging on transhuman cells, enabling a theoretically infinite life span. The square and its components were designed by the Priabonian Consortium of artists, holographers, scientists, and engineers from 168–192 AR and constructed in Beimeni City in 197 AR.

FOUNTAIN TEMPLE: (*See* Fountain Square.)

G

GEMINI, THE: or Neanderthal Man, synthesized by the supreme scientist Damosel Rhea and her team of scientists in the Nicola Facility for Project Gemini. They are created with the Neanderthal's genetic materials and transhuman DNA, reverse engineered from modern transhumans with 99.9995 percent accuracy.

GENESIS SILOS: the silos in the Research & Development Department (RDD) that contain synisms, which create all the raw materials humanity requires to survive, including, but not limited to, soils, minerals, alloys, plastics, and textiles, among others. (Note: Most of the Earth's readily accessible raw materials were depleted prior to the Reassortment Atmospheric Anomaly, which historians believe contributed to the Second Hundred Years' War.)

GRAKA TRAINING BOT: also called Grakas. These synbots are highly skilled with martial arts; were used by the commander Vastar Alalia to test the strength of his strikers, a tradition that continued after his death in 273 AR.

GRANVILLE CROWN: a training program transmitted to underdeveloped transhumans designed to ease their connection to Granville syntech. (*See* Granville syntech.)

GRANVILLE PANEL: (*See* Granville syntech.)

GRANVILLE SCROLL: (*See* Granville syntech.)

GRANVILLE SPHERE: (*See* Granville syntech.)

GRANVILLE SYNTECH: illusory technology developed by the supreme scientist Ninara Granville; contains synisms that influence transhuman senses via the ZPF, creating illusory worlds. The holographic imagery is typically projected from sky panels, unit panels, scrolls, and spheres made of graphene.

GRAPHENE: a single sheet of carbon atoms arranged in a hexagonal honeycomb pattern. It's as stiff as diamond and hundreds of times stronger than steel, yet it is also flexible and stretchable. (*See* Granville syntech.)

GREAT COMMONWEALTH OF BEIMENI: the name chosen by Atticus Masimovian for humanity's territory underground. When asked why, he famously told his brother-in-development, Jeremiah Selendia: "An infinite life span is not a myth. Before the war, before the Atmospheric Anomaly, they were close, so close to achieving the apex of human evolution, and with your help, I know we'll finish our ancestors' work here, and together, ageless and fearless, we'll lead the people back to the Earth's surface."

GREAT COURT OF BEIMENI: the highest court in the Great Commonwealth; a panel of nine judges including a chief justice; men and women are eligible for entry; responsible for interpreting the law as designated by the Office of the Chancellor; hosts hearings for Beimenians in all felony cases where exile to the Lower Level is a possible sentence. It is considered a great honor to give up one's immortality and be named to the Great Court from a lower court in the cities; Chancellor Masimovian believes that only citizens who've given up their immortality can impartially decide whether to take that right away from a fellow Beimenian.

GREAT REASSORTMENT PANIC OF 165 AR: the last panic of the Dark Age, which forced humanity to terraform the Beimeni zone of the underground. It is considered a primary contributor to the rise of Chancellor Masimovian.

GREGORIAN CALENDAR: refers to the legacy timetable prior to the Reassortment Atmospheric Anomaly, which included days, weeks, months, seasons, and years, sometimes followed by the abbreviations AD or A.D. (*anno Domini*) or BC or B.C. (before Christ). This calendar era is based on the traditionally recognized year of the conception or birth of Jesus of Nazareth, with AD counting the years from the start of this epoch and BC denoting the years before the start of the era.

H

HAMMERTON HALL: an entertainment venue designed by architect Wilhelm Vanderslooten in the 200s, dedicated in honor of the hundredth year of Chancellor Masimovian's rule in the year 268 AR.

HARPOON AUCTION: also called the Auction; an important ceremony in the life of a Beimenian, where consortium representatives or wealthy individuals place bids for Harpoon candidates. The valuations for the candidates are determined by the traders who work in Navita City, and while the bids are typically based, in part, on these valuations, the bidders can pay any price they deem worthy for a candidate. In other words, it's entirely possible for a candidate to "fail" the first half of the exams and still receive a bid if the candidate's skills in the second half demonstrate a match for a particular consortium or individual.

HARPOON CANDIDATE: a citizen-in-development who prepares for the Harpoon Exams.

HARPOON CHAMPION: also called the Champion; the title conferred to the Harpoon candidate who receives the first and highest bid during the Harpoon Auction.

HARPOON CLASS: a virtual gathering of candidates from all the thirty territories in the Great Commonwealth for instruction from the Master of the Harpoons. The classes are usually organized in a stadium.

HARPOON DAY: the day of the Harpoon Exams.

HARPOON EXAMS: the life-determining exams given annually from 186–305 AR, bi-annually from 306–335 AR, and tri-annually since 336 AR. They consist of two six-hour sessions, with the first half being a holographic vignette and multiple-choice format designed to test language, math, and science skills, and with the second half being a virtual reality format designed to test critical thinking, telepathic, interpersonal, and physical skills.

HARPOON HAMLET: the village where Harpoon candidates dwell prior to the Harpoon Auction.

HARPOON HARNESS: the harness designed to connect a candidate to Harpoon Virtual Reality (VR). (*See Harpoon Virtual Reality.*)

HARPOON INSIGNIA: three interlocked bronze circles, three interlocked golden triangles, and three silver harpoons overlapped by a phoenix feather.

HARPOON STADIUM: the location of the Harpoon Auction; the stands can be adjusted to fit twenty-five million candidates.

HARPOON VIRTUAL REALITY: also called Harpoon VR; the interface where candidates interact in training and instructional simulations with their developers or with each other during classes or social gatherings.

HELPERS OF THE LEADERSHIP: children in the employ of the Leadership. (*See* Leadership Council, the.)

HOLO-PRODUCER: can refer to a professional artist skilled in capturing events in the ZPF in holographic form or in using synisms to transmit visuals to the transhuman brain.

HOMO EVOLUTIS: also called *posthuman*; theoretical beings whose capacities would far exceed those of ordinary transhumans and who would constitute a separate species.

HOMO TRANSITION: also called *transhuman* (or H+); occupies an intermediate stage, or spectrum, between a normal biological human and a posthuman. Compared to the ancestral *Homo sapiens*, they have higher tolerances to pressure, heat, stress, disease, and to food, water, and sleep deprivation; they also have far greater cognitive abilities, physical regenerative abilities, and emotional intelligence/stability. After the Great Reassortment Panic of 165 AR, circumstances required further biotechnological enhancements to the human genome to better acclimate to the Beimeni zone of extreme heat and pressure variances.

HOUSE OF DEVELOPMENT: an aristocratic house designated as so by the Department of Communications. A lady or lord of a house is often referred to as a *developer*. Their surnames are required to match the name of the house, which can be either the lady's or lord's surname; for instance, Eulalie Lachaize changed her surname to Variscan after the formation of House Variscan, while Thaddeus Tumbstar changed his surname to Summerset after the formation of House Summerset. (*See* developer.)

I

IMPULSE PARTICLE: (*See* wave-particle duality.)

IMPULSE WAVE: (*See* wave-particle duality.)

INACCESSIBLE REGIONS: the regions in the Beimeni zone considered to be off limits to expansion owing to seismic activity within Earth.

ISLAND OF REVERIE: formerly known as Manhattan, became home to the Reassortment Research Terradome, the only surface zone laboratory in use by transhumans to study the Reassortment Strain.

J

JANZER: refers to the race of transhumans designed by the supreme scientist Ahab Janzer. Chancellor Masimovian commissioned the creation of the Janzer race to replace the legacy strike teams' role of protection against structural collapses and Reassortment scares. The Janzers' role also includes law enforcement activities of the Masimovian Administration and expansion plans executed in accordance with approval by the Office of the Chancellor.

JUBILEE: a required public viewing of a voluntary clinical trial of a synbio cure to the Reassortment Strain.

L

LEADERSHIP COUNCIL, THE: also called the Leadership; confidants of the president of the Liberation Front. They are high-level leaders of the Front who confer on strategic decisions, including Polemon strikes and recruitment of new members. From the commonwealth's perspective, these are the most dangerous transhumans in the underground.

LEAGUE OF SCIENTISTS: an elite team of scientists commissioned to complete the Reassortment Strain in the Livelle and Hengill laboratories for the Western Hegemony.

LESSER TERRITORIES: include Gaia, Piscator, Jurinar, Reanaearo, Haurachesa, and Yeuron.

LIBERATION FRONT, THE: the organization of residents of the underground in open conflict with the Masimovian Administration.

LIBERATOR, THE: also known as Jeremiah Selendia; the man who united various factions of residents throughout the Beimeni zone in their conflict with the Masimovian Administration.

LIVELLAN CALENDAR: refers to humanity's new timetable following the Reassortment Atmospheric Anomaly, which includes days, trimesters (underground), seasons (on the surface), and years, followed by the abbreviation AR. (*See After Reassortment.*)

LORUM, THE: the intelligent alien race living on the exoplanet Vigna. (Note: Collective singular, in form and meaning.)

LOWER LEVEL: the part of the underground designated by Chancellor Masimovian as being fit for Beimenians who do not garner a bid at the Harpoon Auction.

LOWER LEVEL ZONE: a layer of the Earth four thousand meters deep.

LOWER TWENTY-TWO: refers to all territories except for Boreas, Xerean, Farino, Zereaux, Kiplorea, and Columbia in Underground North, and Gallia and Gubertiana in Underground Northeast.

M

MAGLEV: a transportation system in which trains glide above a track, supported by magnetic repulsion and propelled by a linear motor.

MAIDENS OF MASIMOVIAN: concubines to the supreme chancellor Atticus Masimovian.

MALCOMBE MINZIER TRAINING CENTER: also called the Hive; replaced the simulation and training facilities previously part of the Comb Cove.

MARK OF MASIMOVIAN: also called the Mark; a synthetic tattoo, black ink formed into the bust of Chancellor Masimovian held by two phoenix feathers. It is an honor conferred if a supreme scientific board conclave deems a Beimenian's work to be worthy of the threshold of significant conversion. (*See significant conversion.*)

MARK OF THE STRIKE TEAMS: the black and gold ink shaped as a captain, striker, aera, and strategist holding hands, swaying, looking down upon Livelle city-state.

MARSTONE: the artificial intelligence designed to understand humanity's connection to the cosmos; later used by the Masimovian Administration to monitor transhuman brain impulses, including, but not limited to, thoughts, speech, visions, and dreams in the ZPF. (Note: Monitored communication is denoted by bold, italicized lettering in Marstone's Database.)

MARSTONE'S DATABASE: the databank that contains all information on residents of the underground; registration to it is required by Chancellor Masimovian's Precepts.

MASTER OF THE HARPOONS: also called the Harpoon instructor, this designation is prestigious in the Great Commonwealth, for the instructor is responsible for providing supplemental mind-body-cosmos training and wisdom on the ways of Beimenians during Harpoon classes.

MIDDLE ZONE: a layer of the Earth between two thousand five hundred and four thousand meters deep.

MIND-BODY-COSMOS INTERFACE: sometimes called the mind-body-cosmos connection; the seamless connection with the ZPF, the body, and the mind enabled by neurochip and mesh implants in transhuman brains.

MINERAL CRUSHERS: synthetic *C. perfringens* designed to burrow through limestone and granite, among other minerals. The latest iterations ingest the minerals and excrete a combination of oxygen and neon.

MISSION PROTOCOLS: rules and regulations, objectives, and strategy and tactics to be employed during a commonwealth mission. (*See* commonwealth mission.)

MULTIVERSE: an infinite realm of being or potential being of which the universe is regarded as a part.

N

NEOPHYTE: a person who is new to a subject, skill, or belief. In Beimeni, most Harpoon candidates who receive a bid during the auction become neophytes for a consortium.

O

OFFICE OF THE CHANCELLOR: the administrative office of the supreme chancellor of the Great Commonwealth of Beimeni.

OFFICE OF THE JUDICIARY: the administrative office of the Great Court of Beimeni; manages the circuit of lower courts in all the villages and cities in the Great Commonwealth. (*See* Great Court of Beimeni.)

OPEN HOUSE: specific to the Research & Development Department (RDD), enables Beimenians who wouldn't normally be permitted into the department to tour certain parts of it.

OPERATION PRESERVATION: the emergency procedures to follow in the event the integrity of Livelle Laboratory is threatened, including, it is hypothesized, the storage of 340 scientists in Livelle Laboratory who're important to the preservation of the transhuman race.

OUTER TERRITORIES: all territories outside Underground Central.

P

PENDANT OF THE CHANCELLOR: communicative technology attuned to the Janzer race, which enables anyone who speaks through it, both audibly and through the ZPF, to control them.

PHANES BELTWAY: the maglev tunnels and stations that loop around Beimeni City, Phanes Territory; the centralized location to verify interterritory travel. Around the beltway, fifty heavily

fortified and protected transport stations are designed to verify travelers are, in fact, authorized to move between territories. All interterritory tunnels in Beimeni's territories lead to the beltway.

PLEDGE TO BEIMENI: a solemn oath of allegiance and fidelity to the Great Commonwealth of Beimeni, recited at the beginning of each Harpoon class.

POLEMON OPERATION: a clandestine operation conducted by the Liberation Front.

POLEMON PASSAGEWAYS: the system of tunnels scattered throughout the underground, built by the Liberation Front.

POLEMON PROCLAMATION: a proclamation issued by the former supreme scientist Jeremiah Selendia to his allies throughout the underground, inviting the unregistered and registered residents of the Beimeni zone to unite with his Liberation Front in the guerilla war against the Masimovian Administration.

POLEMON STRIKE: sophisticated attacks perpetrated by the Beimeni Polemon against commonwealth interests and infrastructure.

POLEMON ZONE: a layer of the Earth between two hundred fifty and three hundred meters deep.

PRECEPTS, THE: the addendum to the Formation document designed to restore law and order to the underground, encourage scientific advancement, protect humanity from danger, and foster economic and cultural growth.

PRESIDENT OF THE LIBERATION FRONT: the highest political and military office of the Liberation Front.

PROJECT GEMINI: commissioned to Supreme Scientist Damosel Rhea in 342 AR with the expressed goal to learn about the origins of life, and to better understand evolution and the processes that influence Reassortment. Eventually transitioned into Project Silkscape. (*See Project Silkscape.*)

PROJECT REASSORTMENT: the research project designed to find a cure for transhumans to the Reassortment Strain.

PROJECT REGENESIS: the research project designed to revive the scientists stored in stasis just prior to the Death Wave. By 327 AR, only Dr. Kole Shrader—known as the Legend for the belief that he might be immune to the Reassortment Strain—remains in living stasis.

PROJECT SILKSCAPE: an entertainment venture with the Harsailles Menagerie: A Garden for Formerly Extinct Species, scheduled to open in the spring of 370 AR at the center of Silkscape City, Lovereal Territory.

PROPER CONVERSION: a meaningful but less onerous standard of scientific achievement as compared to significant conversion. (*See* significant conversion.)

PROTECTOR PROTOTYPE: a new line of telekinetic synbots designed to protect assets considered critical to the commonwealth.

Q

QUANTUM PROBABILITY: quantum mechanics is intrinsically probabilistic; quantum physics doesn't reveal the probability of where an object is, but rather the probability that if you look, you will observe the object at a particular place. The object has no real position until the position is observed.

QUATERNARY PERIOD: is a geologic time period that encompassed approximately 2.6 million years; the second most recent period, which ended with the Reassortment Atmospheric Anomaly.

R

REASSORTMENT ATMOSPHERIC ANOMALY: the great extinction event at the end of the Quaternary Period; also known as the process by which the Reassortment Strain spread throughout the Earth's atmosphere. The anomaly has never been fully understood, though scientists hypothesize that the strain developed unique methods of transforming sunlight and nitrogen into energy.

REASSORTMENT BATON: an alloy rod that transmits the synthesis for *E. agony* into transhuman neural cells, which leads to the painful sensations common to Reassortment infection.

REASSORTMENT RESEARCH TEAM: formed by Ruslan Masimovian during the first year, After Reassortment, on direct order from Chancellor Noriel Livelle; tasked with constructing Reassortment-resistant biomats and to finding a solution to the Reassortment enigma.

REASSORTMENT SCARE: refers to when the Reassortment Strain breaches containment in the underground.

REASSORTMENT STRAIN, THE: a synthetic organism designed with the 4 traditional bases of DNA and their mirrored versions. The Reassortment Strain contains 8 nucleotides and 39 amino acids, and functions in ways unpredicted by science. Scientists believe it learned to live off sunlight and nitrogen and spread rapidly over the Earth's atmosphere, killing most of humanity in what historians called the Death Wave. Nitrogen in the form N₂ can be stripped of electrons and used as a source of energy, and thus finally oxidized to No₂- (nitrite) or No₃- (nitrate); prior to Reassortment, there was no known example of one organism that could do this—it would normally take a conglomerate of several organisms. The strain is intelligent enough to identify humans as human, then it moves into action. It liquefies human neural cells (rapid acid generation) and crystallizes the blood cells (rapid scabbing). The strain recodes portions of its genome every few minutes (acting similar to a computer encryption), and does so with many more combinations given its characteristic of chirality. In nature, near all biomolecules prefer one of two hands, with amino acids and proteins being designated as left-handed (or levo), and natural nucleic acids (DNA and RNA) designated right-handed (or dextro). While the transhuman body's DNA and cells are altered in ways no native pathogen can understand or invade, Reassortment, combining the levo and dextro, can, in fact, enter and take control of transhuman neural and blood cells. Put simply, the Reassortment Strain confounds the enhanced transhuman immune system and as of 368 AR no known cure exists; the fatality rate for exposure is 100 percent.

RECALLER: illegal technology that “recalls” brain impulses, sending new, acceptable ones into the ZPF; can impact transhuman impulse waves within a radius of one to twenty-five meters, depending on the model and preference setting. They're designed to deceive Marstone and look like a benari coin.

RECOMBINASE: an enzyme that catalyzes the exchange of short pieces of DNA between two long DNA strands, particularly the exchange of homologous regions between the paired maternal and paternal chromosomes; used to manipulate the structure of genomes.

REGENESIS CHAMBER: the second laboratory that housed Dr. Kole Shrader's stasis tank, with Dr. Shrader being the last of the living scientists who was frozen near absolute zero, just prior to the Death Wave.

REGENESIS PROCEDURE: the event by which a living creature would be revived after having been frozen near absolute zero.

RESEARCH & DEVELOPMENT DEPARTMENT: also called the RDD; the department founded by Atticus Masimovian to centralize scientific research and most raw material synthesis. (Note: Before and after the Reassortment Atmospheric Anomaly, the Earth lacked readily accessible, valuable metals and minerals such as diamond, gold, copper, iron, and nickel, among others.)

S

SECOND HUNDRED YEARS' WAR: also called the Resource War, the struggle between the Western and Eastern Hegemonies for nonrenewable resources throughout the solar system, which commenced in 103 BR (or 2312 on the Gregorian calendar standard) and ended in the year zero (or 2415 Gregorian) with the Reassortment Atmospheric Anomaly.

SEEPAGE: the unsolved osmotic, diffusive process by which the Reassortment Strain spreads underground.

SIBLING-IN-DEVELOPMENT: (i.e., sister-in-development or brother-in-development), the term given to a brother or sister who are candidates at about the same time and complete the Harpoon Exams together. Siblings who are not necessarily blood-related.

SIGNIFICANT CONVERSION: the highest level of scientific achievement in the Great Commonwealth of Beimeni. (*See* Mark of Masimovian.)

SKILLED TELEPATH: a transhuman with a superior mind-body-cosmos connection with the ZPF.

STRATEGIC EXPEDITION TEAM: also called *strike team*, they were designed to protect transhumans from the dangers of underground living; pledged to the Underground Realm of humanity, rather than to a specific government such as the Livelle city-state or its successor, the Great Commonwealth of Beimeni. Their role transitioned to exploration by the 220s.

STRIKE TEAM AERA: the term attributed to female strategic expedition (strike) team strikers, named for the first woman to complete the striker training program. Like their male counterparts, they focused on traversing dangerous parts of the underground where a structural collapse or Reassortment scare threatened transhuman lives; traditional role transitioned to the Janzers by the 220s.

STRIKE TEAM CAPTAIN: the leader of the three-person strategic expedition (strike) team. The strike team captains were responsible for containing Reassortment breaches in Livelle city-

state (including Livelle Laboratory) and the Underground Realm, which included the villages—not under direct control of the city-state—where transhumans expanded to along prehistoric underground lakes, rivers, and streams inside the Earth. The captains also led underground excursions to stabilize structural collapses and conduct search and rescue operations. By the 220s, the strike team captain's traditional role shifted to the divisional leaders of the Janzers, while the strike teams' purpose shifted to one of exploration. They'd hoped to find survivors of the Death Wave at installations utilized in the solar system during the Second Hundred Years' War but all perished during or after the battles in space.

STRIKE TEAM COMMANDER: the leader of all strategic expedition (strike) team captains; decommissioned after Vastar Alalia, the fifth strike team commander, perished in 273 AR.

STRIKE TEAM STRATEGIST: the strategic expedition (strike) team member focused on logistics, strategy, and containment of a crisis (typically structural or biological) in the underground; traditional role transitioned to the Janzers by the 220s.

STRIKE TEAM STRIKER: the strategic expedition (strike) team member focused on traversing dangerous parts of the underground where a structural collapse or Reassortment scare threatened transhuman lives; traditional role transitioned to the Janzers by the 220s.

SUPREME MINISTRY OF BEIMENI: also called the *ministry*; the electoral body that represents the people of the thirty territories of the Great Commonwealth; based in the Central Government District, Beimeni City, Phanes Territory. Chancellor Masimovian casts the thirty-first and deciding vote in ministerial matters.

SUPREME SCIENTIFIC BOARD OF BEIMENI: also called the *board*; consists of fifteen members, typically with representation from the supreme ministry and from the RDD; based in the Science District, Beimeni City, Phanes Territory.

Board Members circa 368 AR

<u>RDD Facility</u>		<u>Supreme Scientists</u>
Chinook		Dorian Knox
Huelel		Heywood Querice
Leguna		Vanya Canis
Montauk		Yovela Cimmeria
Nicola		Damosel Rhea
Taos		Nasha Ele
Tomahawk		Minta Pollopa
Ventureño		Broden Barão

<u>Territory</u>	<u>Underground</u>	<u>Ministers</u>
Boreas	North	Genevieve Sineine
Dunamis	West	Glenys Carpathia
Luxor	South	Carillon Decca
Palaestra	Northeast	Tethys Charles
Peanowera	East	Urillina Volans
Phanes	Central	Oleris Baltica

Chancellor Atticus Masimovian

Source: Office of the Chancellor.

SUPREME SCIENTIST: a highly skilled and talented scientist, typically with experience in the RDD, appointed by the ministry and the board to lead one of the RDD's facilities and research projects therein.

SUPREME SCIENTIST COVERING REASSORTMENT: a special role carved out within the RDD; third in line to the chancellorship; requires a public campaign and a two-thirds majority vote in the ministry; typically given a seat on the supreme scientific board.

SURFACE ZONE: the surface of Earth.

SURGICAL SEARCH: a Janzer search in the underground.

SURGICAL STRIKE: a Janzer attack in the underground.

SYNSUIT: a suit made of synthetic diamond, designed to protect those who wear them against intense heat and pressure in the underground in areas of the underground where expansion plans are being implemented, where coolant systems malfunction, or where coolant systems don't exist. Variants of the suits are typically worn by aeras, strikers, and Janzers.

SYNTHETIC BIOLOGY: also called *synbio*; the science of selectively altering the genes of organisms to make them do things that they wouldn't do in their original, natural, untouched state.

SYNTHETIC ORGANISM: also called a *synism*; any organism, either based on an existing biological system (such as *E. coli* or the vibrio) or a synthetic one, which has been trained to perform a task it wouldn't otherwise complete.

SYNTHETIC ROBOT: also called *synbots* or *bots*; made of synthetic alloys, typically sculpted to look transhuman. They are designed to perform a multitude of tasks, including but not limited to: provide keeper services to aristocrats, research services to supreme scientists, and record keeping services for the central government. Their communicable range is limited with the ZPF. They lack a consciousness.

T

TELEKINESIS: the ability to move objects via the ZPF.

TELEPATHY: the ability to communicate via the ZPF.

TENEHOUND: a genetically modified greyhound, capable of connecting to the ZPF and controlling lower fauna; utilized by the Department of Peace to find criminals.

TERROR BIRD: a flightless prehistoric bird known for its predatory jabs.

THREAT LEVEL: included in classified dossiers in Marstone's Database; on a scale of one to five, with one being the lowest and five being the highest; an indication of the willingness of a citizen to break the law or disturb the peace of the commonwealth; the higher the threat level, the more scrutiny given to neural feeds in Marstone's Database. In some cases a high threat level could preclude a citizen from being qualified for athanasia. (*See* athanasia-qualified.)

TIMESCAPE: analogous to a landscape, with all past and future events located there together.

TIMESCAPE THEORY: the supreme scientist Heywood Querice's theory that the time lapse for a traveler through space-time could be hours or days, but the time lapse for anyone in the present time should be seamless (i.e., theoretically, if backward time travel is possible, a person who travels back in time should return to the precise moment when they left).

TRANSHUMAN: (*See* *Homo transition*.)

TRANSICEOUS PERIOD: the geologic time period that encompasses the most recent 368 years of history, or since the last great extinction event known as the Reassortment Atmospheric Anomaly, which ended the Quaternary Period. (*See* Quaternary Period.)

TRANSPORT: typically oval-shaped, made of synthetic alloys or carbyne, and constructed in Transport City, Portage Territory. They are built in several varieties, including intracity, intraterritory, and interterritory.

TWIN GODS OF THE COSMOS: the two celestial beings, male and female, believed by the transhuman race to be creators of the metaphysical and physical realms, including the

electromagnetic zeropoint field, and all the galaxies that are, that were, and that will be in all the ever-expanding universes. (*See* multiverse.)

U

UFICILIN: an all-purpose healing agent.

UNDERGROUND PASSAGE: the system of safe houses, businesses, waterways, caves, and tunnels overseen by Beimenians loyal to the Liberation Front.

UNDERGROUND REALM: the generic term for all underground dwellings of humanity After Reassortment.

UNREGISTERED, THE: also called *illegals*, these are residents of the underground that aren't registered in Marstone's Database. As an unregistered resident has broken Chancellor Masimovian's Fifth Precept, if apprehended by the government, the individual is registered, then is either: (1) sentenced to exile in the Lower Level; (2) purchased by a house of development in the great city for employ as a Courier of the Chancellor; or (3) purchased by a house of development anywhere in the commonwealth and prepared for the Harpoon Exams.

V

VITAMIN T: synisms designed to alter impulse waves sent into the ZPF from neurochips and from the transhuman consciousness; typically administered by a liquid dropper into the eyes, where the synisms can directly access the brain. Used primarily by the Liberation Front to elude the tenehounds.

VITAMIN X: also called Vitex; contains synisms designed to reduce the transhuman body's need for oxygen; not intended for long-term use; typically administered by a liquid dropper into the eyes, where the synisms can directly access the brain and body. Used primarily by exiles in the Lower Level.

W

WARNING COMMUNIQUÉ: also called a Warning; the severest form of censure issued by the Office of the Chancellor; typically requires a majority vote by the supreme ministry.

WAVEFUNCTION: synonymous with "the atom." (*See* collapse of the wavefunction.)

WAVE-PARTICLE DUALITY: a photon, an electron, an atom, a molecule, in principle any object, can be either compact and in one place or a wave widely spread out. You can display an object to be bigger than Masimovian Tower or smaller than an atom; you can choose which of these two contradictory features to demonstrate, for the physical reality of an object depends on how you observe it. (*See* collapse of the wavefunction.)

WESTERN HEGEMONY: the United States of America and its allies during the Second Hundred Years' War.

Z

ZEROPOINT ATTACK: an attempt by hackers to use the zeropoint field to destroy a quantum network or system.

ZEROPOINT DISK: also called a *z-disk*; a storage device that could only be activated using the ZPF.

ZEROPOINT FIELD: also called the ZPF or the *field*; the subatomic world through which all matter in the cosmos is connected. Transhumans learned to access and manipulate waves within the electromagnetic ZPF in order to achieve telepathy, telekinesis, interstellar communication, interstellar travel, and time travel.

ZEROPOINT WALL: a part of the ZPF manipulated in order to block unauthorized access or communications.