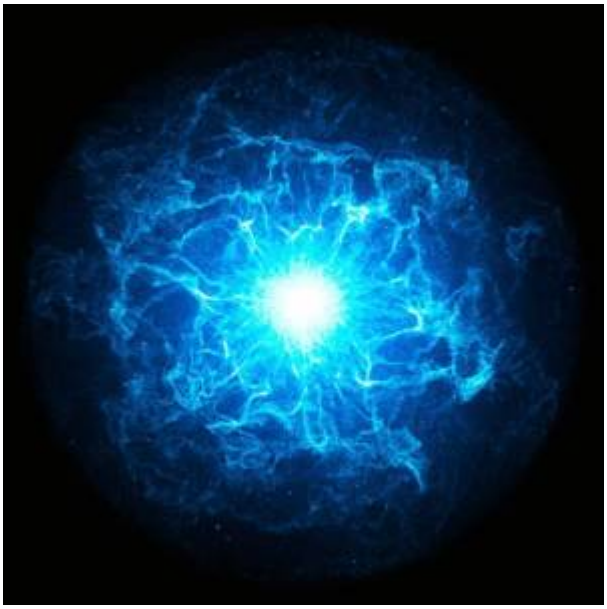
Technology and Decay

Summary

- The Decay is a powerful force that stunts technological development and poses a risk to technology users.
- Due to the stunting of technological growth, technology has large gaps and surprising advances - the most notable is the preference for simple melee weapons in combat.
- Ship Hearts are known to keep the Decay at bay and enable use of complex technology.
- Ship Hearts are primarily employed in Starships but also found used on developed planets. They are reasonably rare but have been accessible since the Last Interstellar War thanks to the Cooperation.
- Startouched commune with and harness power from Ship Hearts and are able to use some of a Ship Heart's power even off-ship.
- Aboard Starships, Ship Hearts project a Ship Personality throughout the Ship. This Personality is highly capable but it is **not** deemed a true intelligence.

Decay and Ship Hearts



The Decay is a universal force that has impeded technological advancement across the galaxy since humanity invented the wheel. The simple fact is that over time, any complex manufactured mechanism will break down and cease functioning. The more complicated the mechanism, the faster this happens. Simple machines and contraptions, even those that take advantage of natural forces such as a glider for unpowered flight, will tend to evade the Decay, but anything more complex will almost certainly begin to deteriorate as soon as it is used.

Due to the damning effects of the Decay, technological progress across the galaxy has been stymied, excepting for the somewhat random leaps and bounds of progress made by the civilisations that founded the Galactic Cooperation thanks to the protection of **Ship Hearts**. These incredibly powerful objects - production of which is not a widely known secret - are capable of both powering large and complicated machines and in doing so protecting them from the effects of Decay. This effect is the

key technology that fuels the Cooperation Zeitgeist with the launching of Starships powered and shielded by these Ship Hearts being its primary technological offering to new worlds.

Aboard a ship, a Ship Heart will be kept in the most secure and well protected area of the ship, often guarded by Startouched Mystics and their machinations, sometimes even beyond the access of a ship's captain. In the event of emergency, ships are capable of ejecting the Ship Heart to keep it safe from harm, though on some ships inspectors have reported that the interference of devoted Mystics may render those systems unreliable.

The Various

Complex biological mechanisms evidently are not affected, but it is as yet unclear why the Decay only affects manufactured mechanics. Though pre-war records are hazy, it is implied that initial research that eventually spawned the Various hoped to defer the Decay by making use of its lack of effect on biological mechanisms, and to some extent it has been successful, provided a balance is struck. The further an individual Various strays from the biological, the greater risk of Decay they open themselves up to.

Those who acquire Various augmentations are in no way considered “lesser” for their choices - taking on augmentations is simply another means of navigating the ever present threat of Decay.

Staying safe from Decay

Though many in settled civilisations manage to live lives unbothered by Decay, the force remains a real and pressing danger to any travelling to planets in the Borderlands or beyond, and still renders any attempt at space travel that is not reliant on a Ship Heart a doomed endeavour. On Borderlands worlds, the areas close to installed Ship Hearts will usually be well-protected from Decay, but the further from a Ship Heart you go, the more likely your technology is to succumb to Decay. Decay is not always a gradual process - it is possible to stumble into intense areas of it where all technology will immediately become useless or - in the worst cases - dangerous.

The range of Ship Hearts can differ in space from on the ground. Usually one Ship Heart is sufficient to protect a large ship outside of atmosphere, whereas on the ground a Ship Heart is more likely to protect a wide area on the surface. This range will generally be enough to cover a city-sized settlement and the area past it. Unlike in space, this area is rarely spherical on a planet, with the Ship Heart's range greater on the surface than directly through ground. This does vary from Ship Heart to Ship Heart somewhat, and the exact reason for this is unknown.

Ship Hearts and Mysticism

The exact workings of Ship Hearts are not widely known, but the mysteries surrounding the capabilities of the Hearts - their power, their ability to operate multiple systems in tandem, and indeed the relationship with the Decay - are the subject of devoted study and exploration by the Mystic Sects. With great study, dedication, or sometimes sheer devotion, Startouched are capable of tapping into the power of Ship Hearts and harnessing it for later use. When a Startouched uses their power, they inherently feel themselves exerting the power of the Ship Heart they attuned with, though the mechanism of this phenomenon still remains unexplained.

Technology Levels

Due to the warping of technological advancement due to the Decay, there are strange gaps and leaps in technology for all civilisations in the galaxy. The most notable point is that most military endeavours are focussed on simple melee weapons rather than complicated ranged weapons, to avoid any risk of weapons suddenly failing in the middle of a fight due to Decay. When ranged weapons do enter the equation they are generally simple mass drivers. Though there are exceptions, the tried and tested Decay-proof methods are most reliable and generally prove effective enough. Similarly, while powered armour certainly exists, simpler armour is generally a preference for missions into areas with a high Decay risk.

When powered directly by a Ship Heart, few need to worry about access to energy. However, those used to Borderlands exploration have had to find their own solutions to energy to power their equipment. Battery power, solar power, or petitioning a connection to a Ship Heart are all ways to circumvent this problem, and solutions for portable energy transportation are often a focus of the Cooperation Zeitgeist's research.

Communication and Travel

Necessarily, telecommunications are only capable when protected by a Ship Heart, meaning that much of galactic society developed around a necessity to deliver messages in person or by physical means. Since being able to call on the abilities of Ship Hearts, instantaneous long range communications have been made possible - Startouched in particular can usually communicate with any Ship Heart within the same solar system as them - but in general, the people of the galaxy are more used to face to face interaction over remote contact.

As a result, while technology levels are generally advanced (where protected by a Ship Heart), populations are not as globally (or galactically) connected as one might expect. On a single spaceship, where everything is protected from decay and the whole ship has wired networks throughout, there may be a public communications network that looks something like a local area network. However, planetside communications or communication between spaceships will require specific technology such as a Communicator. This means that the ever-present communication methods which players may OC expect (phones, satellite networks, the internet) do not exist in *Planetfall*, and people do not usually carry equipment long-distance communication on them unless they are specifically equipped for a communications role.

Faster Than Light travel has also been made possible in the Cooperation Zeitgeist thanks to the advent of Interstellar Gates - these portals through space allow ships that pass through to travel from one side to the other in a matter of minutes. They are incredibly difficult to set up, however, requiring specialist equipment and planning to do so. Communications cannot pass through an Interstellar Gate unless the data/message is taken on a ship that is physically passing through the Gate from one side to the other.

Terraforming

Another of the Cooperation's technological marvels is the Terraforming Seed. This technological masterpiece, under the protection of a Ship Heart, can completely transform the climate of a barren rock into a place capable of supporting life - seeding the world with the tools to evolve its own flora, fauna, and atmosphere. The miracle of the Terraforming Seed is that this process takes only 1,000 years (rather than the millions of years required normally). Using Terraforming Seeds, the Cooperation can take completely uninhabitable worlds and make them ready for habitation in only a millennium.

Due to the speed of the process and the nature of nature, the results are often unpredictable - the plant and animal life created by Terraforming is unique and varied, and aside from producing worlds for settling and living on, the process also creates countless biological phenomena to be discovered. While the process in theory can create sapient life, Terraforming Seeds are designed to curtail the speed of evolution before that point.

Holodecks and Virtual Reality

Technological marvels are not confined only to the functional, everyday world. Holodecks are one of the most immersive entertainment experiences possible in the Cooperation - and highly valued, since it would be challenging even for the most wealthy to physically travel to every planet in the course of a lifetime. They can also be used by gamers, historians, even detectives - anyone who wants to recreate the experience of a location that either could never exist, no longer exists or that you simply can't get to right now.

There are many kinds of holodeck systems, but by far the most common are those built on Neurophysiological Interface (NPI) technology, which are popular due to their relative lack of disruptive side-effects. NPI holodecks combine traditional hard-light holography with high resolution monitoring and precision stimulation of users' nervous systems and general physiology, to produce an immersive experience without equal. Anything the user can do in the real world (or the 'meatverse' as some holo-enthusiasts call it) they can also do in the virtual world, while the virtual world is also able to inflict realistic effects on users in a way that traditional holography alone cannot achieve.

Holodecks run programs that define the scenario experienced by the users. As users are free to interact however they wish, it would be prohibitively complicated to manually script anything beyond the most rudimentary of settings. Therefore, holodeck scenarios are usually created by feeding a large body of source material - such as video clips, bodies of literature, detailed terrain scans, etc - into high-powered data extrapolation software. The extrapolator can then produce a scenario that hews closely to the source material and the creator's intention, while still being able to cope with more or less anything the users choose to throw at it - although the more 'off-script' users go, the weirder things might get.

Starships and Personalities

Starships, being necessarily powered by a Ship Heart, are the most technologically advanced localities that the Galactic Cooperation's technological Zeitgeist has to offer. Ships are often equipped with high powered mass drivers, laser focussing technology, reactive armour plating, wireless networking capabilities and holodecks. Of these, only wireless networking and holodeck capabilities have become mainstream within advanced Cooperation cities. Starships vary hugely in size and purpose, though the requirement for inclusion and sufficient protection of a Ship Heart means there is a minimum size. Unwieldy Battleships and Transports are just as common in space as sleek Destroyers or luxury Cruisers.

Life aboard Starships and Stations is consequently vastly more luxurious than planetside life outside of the core Cooperation worlds, despite decreased living space. In part this is down to the perpetual access to complex items, but also down to the omnipresence of the Ship Personality - a projection of the Ship's processes that manifests differently from ship to ship and is responsible for maintaining operations. Some Personalities are more personable than others, some prefer to consider themselves strictly functional, and how much they communicate with ship denizens is a personal choice. Interaction with these Personalities is also an important part of Startouched Mysticism.

Personalities are **not** considered to be true intelligence.

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