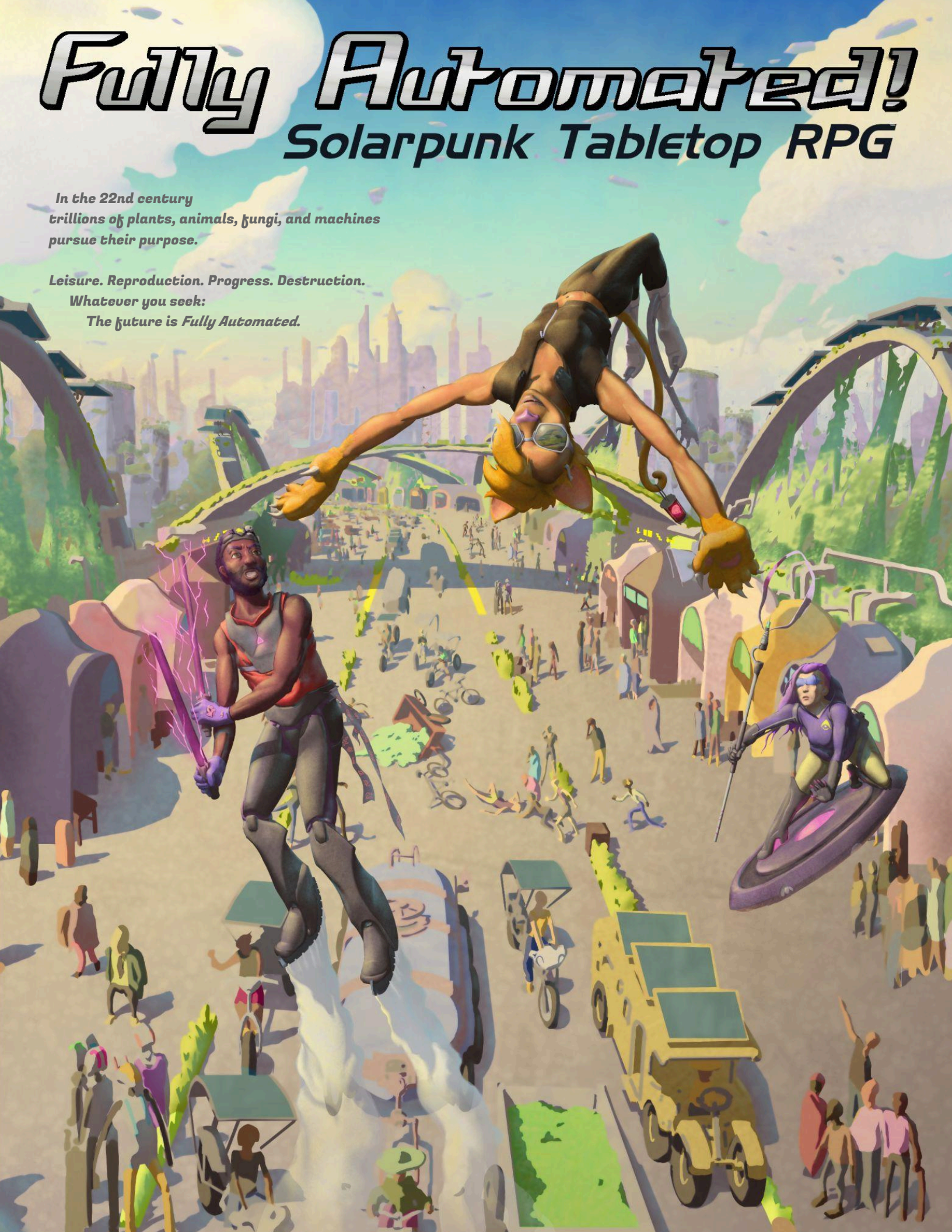
Fully Automated!

Solarpunk Tabletop RPG

In the 22nd century
trillions of plants, animals, fungi, and machines
pursue their purpose.

Leisure. Reproduction. Progress. Destruction.
Whatever you seek:
The future is Fully Automated.



~

Ablation narrowed their feline eyes as they assessed the situation. The Basalt Assault crew had the team pinned down. Ore was barreling towards them at terrifying speed. With all other options gone, Ablation silently prayed to the spirits and took their only shot. It was a desperate fade-away from behind the three, but it landed. The net swished. And the crowd lost it.

Just then, an urgent message broke through Ablation's call block to appear in their HUD. It was from Rez, and read "PRIORITY 1". Ablation grabbed their comm collar from the courtside bench. The moment its conduction speaker contacted their neck the ringer blared to life in their head.

"Hey Rez. Report?"

"Suppression-extraction. Malibu. I'm en route to you now. Can you clear Pegasus a space?"

"Yeah. Who's the target?" Ablation turned to the other players. "Make some room!"

"It's a commune of fifty sovereigns. They refused assist yesterday. Since then their primary and backup heat absorbers failed."

Ablation looked toward the virtual indicator in their AR contact lenses. The transparent marker was soon washed out by yellow and red lights that pulsed with the familiar chirp of Pegasus' approaching siren. By now the crowd on the grassy hillside and the neighboring balconies were looking in the same direction. "What's the timeline?"

"They say they have enough gel to hold out 30 minutes, so… that." Dust momentarily gusted around Ablation as Rez decelerated sharply, setting Pegasus down on the half court line as they cut the rotors and siren. Ablation disabled away mode and saw in their HUD the flood of reacts from the crowd, along with an excited wave emote from Pegasus. Plus a warning from Ore that Ablation had better get back safe and finish business.

"You still know how to don a firesuit on the back of a bike?"

Ablation popped the cargo trunk, doffed their shoes and skirt, and stepped into the lower half of the firesuit. They threw their things in the trunk and swung a leg over Pegasus' back seat. "That's funny, Rez. Spin it."

"Alright, Peg, you heard 'em: if they fall off they can't blame us for flying too fast." Pegasus gave a laugh react and a thumbs up and spun up her rotors. Ablation held on tight as the park and its crowd dropped away fast, and Ablation's vision filled with briefing text and the real-time location of an airship steaming towards the plume of smoke rising from the Santa Monica mountains ahead.

The rescue would be dangerous. And uncertain. But then again, saving something always is.

~

Looking for your first Fully Automated! adventures?

Download our free & open-source starter campaign!

Campaign 1: Regulation!

Containing three original missions of increasing complexity!

- ➢ *Investigate corruption in the power grid in "Demonstration of Power" !*
- ➢ *Rescue a mental explorer trapped in their own mind in "Psychonautica" !*
- ➢ *Aid a gang of whitehat biohackers to stop a terrifying plot in "Piece of Mind" !*

A collection of adventures designed to introduce players to Fully Automated
by the Fully Automated OG Dev Group

Editor's note

Despite a widespread perception that positive futures are boring, I find the opposite is true. In a world of unceasing nihilism… nothing matters. But when I went looking for a non-dystopian earth-based sci-fi RPG a few years ago, I couldn't find much. So my friends and I homebrewed what I later learned was a solarpunk setting.

As we played, I found that spending time in the game – in this high-tech socially advanced setting – was not just fun, but also transformative. It's hard to work toward a future most of us struggle to imagine (let alone believe in). But tabletop RPGs excel at making other worlds feel familiar. This is why we decided to release this game as an extensive open-source toolkit for telling personal stories in this rapidly growing genre.

For anyone seeking clarity on what this looks like, we have three pieces of advice.

First, check out our Media Recommendations. There's a lot of fiction, non-fiction, and other tabletop games that readers may enjoy and find useful.

Second, consider some of the following sources of conflict. Though our imaginations are often unpracticed at telling stories that don't assume life to be perpetually antagonistic, it's not hard to remember that even in the best conditions, humans will always have conflicts.

- Imagine a cyberpunk story, but in a world of accountability and justice. Unethical experimentation; assassination; robbery. The classics work better than you'd expect.
- Think of the dissidents. Capitalists trying to return to the old ways? Nativists opposing free migration? Revolutionaries demanding further progress? Nihilists seeking chaos?
- Consider temptations. Who holds power, and when might it be abused? An engineer concealing a failure? A chef determined to ruin a rival ? A blackmailed co-op chair?
- Consider nonhuman problems. Accidents, natural disasters, medical emergencies, etc..

Third, to imagine a believable better world:

- Set a story in a place you know. What did the landscape look like before it was settled, and what could it look like without the limitations of modern construction techniques?
- Imagine the privileges of wealth shared broadly. Imagine the freedom to pursue leisure and purpose. Imagine a world where great, fulfilling days are commonplace.

Lastly, to see story examples, jump to the Resources for GMs.

We hope that you enjoy this game, and that it may be one of many resources that introduce new ways of looking at the paths out of our polycrisis.

- Andrew R Gross

Authors

Fully Automated OG Dev Group:

Andrew R Gross	shrad.org	@andrewrgross@aleph.land
Jack Gross	jonathanrgross.com	
Cromlyn	bakefoldprint.wordpress.com/	
Sean Bodley	https://seanbodley.com	www.patreon.com/seanbodley
Luna Sjonger		
Jacob Coffin	jacobcoffinwrites.wordpress.com/	@jacobcoffin@writing.exchange

Art by

Sean Bodley	seanbodley.com	
Jacob Coffin	jacobcoffinwrites.wordpress.com/	@jacobcoffin@writing.exchange
Wanderingmeomeo		@wanderingmeomeo@socel.net

Dedication

This game would not have been possible without friends, family, and playtesters:

Tony; Si; Marge; Peter; Jeff; Ari ; AE Marling; Goose; Yar; Jonathan; Pyro; Toli, Kuster, Ryan, Bryce, Lawrencelot, Liren, Kurt, Joshua, Flynn, Jordan, poVoq, Five

Gratitude for our elders

This game would not be possible without all the wisdom and experimentation gifted to us by those who've come before and passed on what they observed. We give a special thanks to our elders who shared stories of culture in small towns and villages, yankee thrift, humility, service to neighbors, and to elders around the world who've tried to improve the world for those who come after, and pass down whatever knowledge they could.

We advise any GMs looking for fresh eyes to call grandparents and mentors and ask them for stories from times and places far from what we know here and now to inspire them.

Licensing

Generative text was not knowingly used within this manual. Synthetic images were used as inspiration and as component assets in some photobashes. No images contained were directly generated from a synthetic image generator. In any images which contain synthetic imagery as components, no such components make up a majority fraction of the image overall.

Table of Contents

Getting Started

This manual is intended to help anyone play a high-tech futuristic solarpunk tabletop RPG. To do so, it's frontloaded with the most important information to get readers playing fast.

If you're a new player joining a game:

1. Read through the new player quickstart guide on the next page, starting with the Setting Summary.
2. Read the Basics of Gameplay.
3. Select or Create a Character.

After that, the rest is optional. The World Guide is an encyclopedia describing the world. The Gameplay Mechanics section provides detailed rules of play. And the section titled Inhabiting the World is an extended set of descriptions for how to understand and relate to the setting in order to imagine it more vividly than the world guide might provide.

If you're a game master looking to start a game:

1. Read through the new player quickstart guide.
2. Read the Gameplay Mechanics (Or don't. Just graft this on to whatever your favorite system is. We don't mind.)
3. Ask your players how they feel about combat. If they're interested in structured combat, read through the Combat Mechanics and review it with your players.
4. Review the Setup Checklist for GMs
5. If you have questions about establishing the setting, review relevant sections of the World Guide as well as in the section on Inhabiting the world.
6. Begin prepping your session. We recommend starting with the introductory stories in ***Campaign 1: Regulation!***

If you're a creative looking to write your own modules, create your own tabletop game, make a video game, write fiction, or just worldbuild then review this guide in whatever order makes sense to you. And if it helps you create anything, please consider sharing it with us and other players.

New Player Quickstart Guide

Setting Summary

Fully Automated takes place in the Los Angeles metropolitan area in the 2120s, in a high-tech post-capitalist society where work is optional and basic necessities are free. For more details on how goods and services are provided, see The Economy. But for the sake of understanding the world quickly, just imagine that it's always Saturday.

Culturally, changes come from an individual's place within their society. Instead of lonely worker bees driving separate cars and keeping to themselves, people recognize the necessity of interconnectedness with their community and environment at every level. Apartment dwellers are accustomed to sharing common areas. Urban centers and outlying suburbs have become integrated into the natural landscape and between themselves. Wilded parks suffuse every neighborhood, and disc golfers give wild animals they cross the same respectful distance that they would a fellow passenger reading a book on a train. National governments remain, though their authority has diffused. Strict codes of laws and punishments have evolved into a collection of rules and restorative actions. There's plenty of structure, but rigid delineations and hierarchies are seen as outdated notions from a bygone era.

Though life has far less compulsory stress, the fundamental elements of human nature – curiosity, ambition, rivalry, etc. – still create conflicts. That's when ordinary people like you step up to investigate, assist, defend, and fight.

Basics of Gameplay

During gameplay the game master (GM) will describe scenes and players will declare their intended actions. Outcomes are determined as follows:

1) The player or GM identifies a relevant base **Attribute** and **Skill** and adds them together to get their **Ability Score**. *For example: Intelligence + Assess Tech.*
2) The player rolls two d10 dice and reports the sum of their Ability Score and roll.
3) The GM describes the outcome based on the total.

For example, if the character described below were being followed, the GM might ask them to roll for Observation + Situational Awareness. Their Observation is 9 and their Situational Awareness is 4, so their Ability Score is **13**. If they roll a 4 and a 6 (for a total of **10**), they report that they **rolled a total of 23**.

The GM then describes the outcome. They might say, *"You glance at a board game library's window and notice in its reflection a young person in sunglasses and a hat behind you. You recognize them from the crowd at the food market you passed five blocks back."*

For more details refer to the Skill Checks section within the Gameplay Mechanics.

Strength	Dexterity	Charisma	Intelligence	Observation	Knowledge	Endurance
8	4	5	6	9	9	9

Empathy		Acting		Situational awareness	4	Psychology	3
Care		Charm		Detection & Analysis	7	Medicine	2
Stealth		Intimidation	1	Assess Tech	5	Wilderness	3
Will		Art, Music, + Culture	8	Research & Investigation	6	Law & Crime	4
Athletics	2	Community Contact	4	Hacking Software	1	History & Geography	5
Combat	3	Riding & Piloting		Hacking Hardware		Physics & Engineering	5
Psionics				Poetry	1	Chem & Molecular Bio.	2

Combat encounters can be run in several ways based on player tastes, and are described under Combat Mechanics. Talk to your GM about whether they'll be using the combat system and how.

Throughout this manual we use the term "GM" to refer to the person who prepares and facilitates games, as we believe that games are more interoperable and user-friendly when we adopt shared conventions and terminology. If you find the term "Game Master" to imply too much control over your games, feel free to call the role the "Story Guide" or SG instead.

Quick Character Creation

First, consider one of the **premade characters**. To make your own, start with a blank character sheet. There's also a simplified version. For details see Creating a Character.

When making a character consider the following:

- What kind of person do you want to be in your personality, motivations, and ethics?
- What kind of unique abilities or skills do you think would be fun to have?
- How might you integrate into a team? There are no character classes, but advice for playing "types" such as *hacker* or *healer* can be found under Character Types.
- Consider joining a service organization to justify responding to emergencies.

Once you have concepts in mind, start filling in the attributes and skills as described below.

> ***Helpful Hint:*** *You really only need to do steps 1 & 2 and have a concept to get started playing.*

1. Assign your **Attribute** stats. You have 49 points to distribute between the seven Attributes. None can be lower than 4 or higher than 10 to start (though they may go up to 12 with augments). One way to do this is to assign 7 points to every Attribute and then move points from one to another within the allowable range.
    a. Mark down your **HP**: it's your Strength + 2x Endurance
    b. Mark down your **Speed**: it's Strength + 2x Dexterity
2. Choose where to assign the following **skill points**:

8 pts	1 skill
7 pts	1 skill
6 pts	1 skill

5 pts	3 skills
4 pts	3 skills
3 pts	3 skills

2 pts	4 skills
1 pt	4 skills

Some skills afford abilities from the Abilities & Augmentations trees:

- For every 2 points invested in the **Combat** skill, take 1 **Combat Ability**
- For every 2 points invested in the **Psionics** skill, take 1 **Psionics Ability**
- For every 2 points invested in the **Athletics** skill, take 1 **Athletics Augment or Ability**
- For every 2 points invested in Law & Crime, History & Geography, Physics & Engineering, and Chem & Molecular Bio (all added together), take 1 **Mental Ability**

Example: if you have 4 points in Combat, take 2 Combat Abilities.

If you have 1 point in each of Law & Crime, History & Geography, Physics & Engineering, and Chem & Molecular Bio, take two Mental Abilities.

3. Select your **Abilities and Augments** from the abilities trees based on what skills you've chosen and whether your GM grants you any starting XP. A copy of the Abilities trees can be found on page 4 of the blank character sheet.

4. Choose your **Combat Actions**. You can have as many you like, but their total cost cannot exceed your skill points in combat. See the Combat section for details.

Many proficiencies bundle in lower cost ones. If a player selects a proficiency with a sword, it's assumed that they're also proficient with a club and E-baton, for example.

Attack	Cost
Punch	0
Claws / Gorilla Punch / etc. *(Free for parahuman animals)*	0*
Spray	0
Knife	0.5
Club / Improvised Melee	0.5
Pistol	0.5
E-baton	1
Slingshot / Nanodarter	1
Shortbow/Crossbow	1.5
Microdarter / Rifle *(Comes with Pistol & Nanodarter)*	1.5
Whip	1.5
Trained Strike *(Comes with E-baton)*	2
Sword *(Comes with e-baton and club)*	2
Staff / Spear	2
Shuriken / Throwing knives/ Improvised throwables *(Comes with Knife)*	2
Gluegun *(Includes microdarter/rifle/pistol/nanodarter training)*	2.5

Once your Attributes and Skills are assigned, fill out the character's backstory. There is room for the basics on page one, and then plenty more for writing a longer biography on page two.

Players are encouraged to build characters by establishing who their friends and neighbors are. Who do you call on to borrow a cup of sugar? Of what clubs are you a member? Are you in a faith community? Unlike many RPGs, lone-wolf orphans are rare. Most characters – *especially* orphans – have a family of people who bore responsibility for their care in youth. Kids, nieces, and nephews are common. This is true of synths too: the typical synth upbringing consists of four years in a boarding school environment where they're socialized and tested for competency before heading out into the world.

These connections don't just offer GMs a pool of NPCs to threaten in order to create stakes. If you want a contact on the inside when trying to access places or data, it's a good idea to have friends and be known by your community.

To help you with this and ground your character in the world, communicate an education and work history under CV. Feel free to leave long gaps between commitments. Include associations and hobby groups with which you've been involved. Help the GM create settings by summarizing where you live and with whom. Agree to a social media follower count with your GM. Describe your family and close friends, including animal companions and synth assistants.

Consider giving your character some **present goals**, **long-term goals, motivations,** and **vulnerabilities**. If you have trouble thinking up goals and motivations consult your GM. And feel free to add rule violations (the equivalent of a criminal record) if it suits your character.

Page 3 of the character sheet is the **Actions and Items** page. It's for tracking things that may change within a session like current HP, items, expendable abilities, and available combat actions. It's recommended that players compose a default version that lists their starting HP, Speed, and unarmed combat abilities. Write abilities you may want to use on the right. Inside the "Carry" square, place any combat action cards that require a weapon that your character might have on them on an average day. Then include the rest of their everyday carry: keys, a cyberdeck or mobile device, a hydroflask, etc.

You're ready to go!

This is the end of the new player quickstart guide. If you've run everything by your GM, go pick out your snacks and drinks of choice because you're ready to go!

If you've gotten this far and want more then feel free to peruse the World Guide for pages and pages of details on how we got here, how the government works, who responds to emergencies or what new social struggles you can fight for and much more. If that's not enough or you have some philosophical questions about how living in this world is supposed to *feel*, there's a section called Inhabiting the World meant just for you. Have fun!

Fully Automated!
Solarpunk Tabletop RPG

Names

Date of creation
Place of creation
Species, Gender,
& sapience

Strength	Dexterity	Charisma	Intelligence	Observation	Knowledge	Endurance

Empathy		Acting		Situational awareness		Psychology	
Care		Charm		Detection & Analysis		Medicine	
Stealth		Intimidation		Assess Tech		Wilderness	
Will		Art, Music, + Culture		Research & Investigation		Law & Crime	
Athletics		Community Contact		Hacking Software		History & Geography	
Combat		Riding & Piloting		Hacking Hardware		Physics & Engineering	
Psionics						Chem & Molecular Bio.	

Combat Actions

HP

Speed

XP
Earned

XP
Spent

Family, Neighbors, & Acquaintences

Curriculum Vitae

Followers
Living Arrangement

Gear, Bio, Notes, etc.

Augmentations & Abilities

Fully Automated!
Solarpunk Tabletop RPG

Names

Date of creation

Place of creation

Species, Gender, & sapience

Biography

Extended Community

Present Goals

Long-term goals

Motivations

Vulnerabilities

Violations

Desired Augments & Abilities

Names

Actions and Items

HP

Speed

Armor

Combat Actions

Action - Movement

Move

Move 4 hex

-1 hex if played previous round

-1 hex for rough terrain

-2 for moving another body. Requires a roll ≥ [0]

Optional if Aimed:

Move 6 hex

Defense ~

Defend

Negate effect of attack and move 1 hex

Must move 1 hex if attacked

Roll with Disadvantage
unless adjacent or behind cover

- -	Fail
-	Attack Disadvantaged
0	~
+	Counter Attack w/ Dis.
+ +	**Counter Attack**

Action - Special

Aim

Advantages next attack or defense

Applies aim effect to next attack

Disadvantages defense against next attack

Effect is retained for one additional round if not used

Items

Premade Characters

Premade characters are available to use as-is or to modify.

Pulsação / Pulsa / Aide Fuentes

Fighter, Negotiator

Pulsação is a Capoeira artist skilled in dance, martial arts, and sports medicine. She's a friend to anyone in a tight spot and enjoys serving others through the LA Protectors League.

Str	Dex	Cha	Int	Obs	Know	End
7	***10***	***8***	***6***	***7***	***5***	***7***

8 Skill Points	7 Skill Points	6 Skill Points	5 Skill Points		
Combat	Charm	Athletics	Empathy	Art, Music, & Culture	Situational Awareness

Dusty / DustySpokes / Chelsea Lin

Investigator, Athlete

Dusty is a bike courier and problem solver living life a kilometer at a time. She's a Mars dreamer with an ear to the ground who is known to be faster than anyone in fixing a flat or chasing a lead.

Str	Dex	Cha	Int	Obs	Know	End
8	***8***	***6***	***7***	***7***	***6***	***8***

8 Skill Points	7 Skill Points	6 Skill Points	5 Skill Points		
Situational Awareness	Community Contact	Athletics	Research & Investigation	Empathy	Riding & Piloting

Windrush / Gillian Phong

Negotiator, Healer

Windrush is an aguamodo port worker who likes to discover. Whether getting to know other workers over a beer or exploring kelp forests with her kids, she's always up for adventure.

Str	Dex	Cha	Int	Obs	Know	End
6	***7***	***8***	***7***	***7***	***6***	***8***

8 Skill Points	7 Skill Points	6 Skill Points	5 Skill Points		
Care	Charm	Athletics	Medicine	Community Contact	Intimidation

ByteScythe / Gail Becker

Hacker, Knower

ByteScythe is an experienced hacker with a dark sense of humor. Aside from playing with her grandbabies, there's nothing she loves more than having a front-row seat to watch drama unfold. And if she can help while she's rubbernecking, it's a plus.

Str	Dex	Cha	Int	Obs	Know	End
5	6	6	**9**	**8**	**8**	7

8 Skill Points	7 Skill Points	6 Skill Points	5 Skill Points		
Hacking Software	History & Geography	Assess Tech	Hacking Hardware	Law & Crime	Psychology

Miss Grant / Elizabeth Tisha Grant

Investigator, Negotiator

Miss Grant is known as one of the fiercest and most exacting consumer advocates in LA. And after dark, she is known as one of the most alluring professional submissives in Pacifica.

Str	Dex	Cha	Int	Obs	Know	End
4	7	**9**	7	7	**8**	7

8 Skill Points	7 Skill Points	6 Skill Points	5 Skill Points		
Research & Investigation	Intimidation	Assess Tech	Charm	Law & Crime	Detection & Analysis

Hiro Yasuke / Naeem Freeman

Hacker, Fighter

Hiro is a seasoned spaceship mechanic and anime nerd with skills in tech and swords.

Str	Dex	Cha	Int	Obs	Know	End
6	**9**	6	7	6	7	**8**

8 Skill Points	7 Skill Points	6 Skill Points	5 Skill Points		
Combat	Hacking Hardware	Psionics	Hacking Software	Assess Tech	Physics & Engineering

Father Muscles / Georgie Sinclair

Healer, Athlete

Father Muscles is a servant of Christ who believes that there are many paths to the Lord, but his is through the consecration of his body and the mending of others, both physically and spiritually.

Str	Dex	Cha	Int	Obs	Know	End
10	***7***	***8***	***4***	***5***	***7***	***10***

8 Skill Points	7 Skill Points	6 Skill Points	5 Skill Points		
Care	Medicine	Athletics	Empathy	Will	Psionics

Mr. Winner / Mimi Nguyen

Negotiator, Investigator

Mimi Nguyen is a charismatic comedian and lounge singer. As the stage performer Mr. Winner, Mimi is a prominent u-chimpanzee entertainer with fans around the system.

Str	Dex	Cha	Int	Obs	Know	End
6	***4***	***9***	***6***	***9***	***8***	***7***

8 Skill Points	7 Skill Points	6 Skill Points	5 Skill Points		
Charm	Situational Awareness	Art, Music, & Culture	Acting	Community Contact	Intimidation

Hypebot420 / Guy Bangalter

Investigator, Knower

Hypebot420 is a DJ looking for fun, adventure, and novel, distinctive sounds for sampling.

Str	Dex	Cha	Int	Obs	Know	End
8	***4***	***5***	***6***	***9***	***9***	***9***

8 Skill Points	7 Skill Points	6 Skill Points	5 Skill Points		
Art, Music, & Culture	Detection & Analysis	Research & Investigation	Physics & Engineering	History & Geography	Assess Tech

Mayhem / Joaquin Krikorian

Fighter, Athlete

Joaquin Krikorian got his nickname as an MMA fighter for both his fighting style and his outspoken anarchist activism. As a protector with the Free Protectors Network he serves his community with his improvisational approach to justice.

Str	Dex	Cha	Int	Obs	Know	End
8	***4***	***5***	***6***	***9***	***9***	***9***

8 Skill Points	7 Skill Points	6 Skill Points	5 Skill Points		
Combat	Will	Athletics	Community Contact	Intimidation	Psionics

Ewan Reinhart

Investigator, Fighter

A taciturn and philosophical detective.

Str	Dex	Cha	Int	Obs	Know	End
9	***4***	***4***	***7***	***9***	***7***	***8***

8 Skill Points	7 Skill Points	6 Skill Points	5 Skill Points		
Situational Awareness	Research & Investigation	Psychology	Combat	Law & Crime	Hacking Software

KnowHound / Marigold Sinclair

Investigator, Hacker

Marigold Sinclair is a teen journalist eager to get their scoop. Though young, they've already begun to build a reputation for their mix of data analytics and shoe-leather investigation.

Str	Dex	Cha	Int	Obs	Know	End
5	***7***	***6***	***8***	***8***	***8***	***7***

8 Skill Points	7 Skill Points	6 Skill Points	5 Skill Points		
Hacking Software	Detection & Analysis	Assess Tech	Research & Investigation	Hacking Hardware	Psionics

Voidstar / Xak Friedman

Negotiator, Hacker

Voidstar is a cyborg hacker influencer known for their love of puns and their passion for inventing useful tools alongside absurd joke devices.

Str	Dex	Cha	Int	Obs	Know	End
7	***8***	***9***	***9***	***5***	***5***	***6***

8 Skill Points	7 Skill Points	6 Skill Points	5 Skill Points		
Community Contact	Hacking Hardware	Charm	Hacking Software	Detection & Analysis	Acting

Jon Giles

Investigator, Hacker

Jon Giles is an artisan repair specialist who can fix anything, but specializes in restoring arcane antique hardware.

Str	Dex	Cha	Int	Obs	Know	End
8	***8***	***5***	***8***	***8***	***7***	***5***

8 Skill Points	7 Skill Points	6 Skill Points	5 Skill Points		
Research & Investigation	Detection & Analysis	Hacking Software	History & Geography	Access Tech	Hacking Software

Gameplay Mechanics

These are the rules that have been developed to convey the themes and the world and facilitate a style of play we think serves the setting. Use them in whatever way is useful to you and your table.

Roleplay Mechanics

This manual is written primarily to aid with storytelling, so the gameplay mechanics are secondary. The story should work with whatever game mechanic you prefer. But the recommended system is similar to the d20 system used in Dungeons & Dragons and Pathfinder, except players roll two ten-sided dice (abbreviated as 2d10) for skill checks instead of a d20. Though 2d10s are recommended, you can use a d20 and it'll still work.

Performing Skill Checks

Players add the most relevant **Attribute** to the most relevant **Skill** to get an **Ability Score**, then add their dice roll to this number. They may also add one or more modifiers if they're using a special ability or based on modifiers imposed by the GM based on the situation. The resulting total is their **total score**. For a typical skill check, a total score of 21 - 25 is a moderate success, and a total score of 26 or greater is a decisive success.

For example, if a player with the character sheet shown below were trying to deceive an NPC, the GM would tell them to roll for [Charisma + Acting]. The player would add their relevant Attribute (Charisma, 9 pts) to their relevant Skill (Acting, 5 pts) for a total of 14. This would be their Ability Score. If they rolled a 6 and a 7, they'd add these to the Ability Score to get their total score: 27. If the task being attempted is easy, the GM would likely consider this a decisive success. If it were a very challenging deception to pull off, the GM might announce that the player is attempting it at a disadvantage of 4. In this case, that would result in a total score of 23. That would typically still be a success, but the roleplay outcome would reflect that the result was a modest success rather than a decisive one.

Strength	Dexterity	Charisma	Intelligence	Observation	Knowledge	Endurance
6	4	**9**	6	**9**	**8**	7

Empathy	4	Acting	5	Situational awareness	**7**	Psychology	4
Care	3	Charm	**8**	Detection & Analysis	3	Medicine	1
Stealth		Intimidation	5	Assess Tech	3	Wilderness	2
Will		Art, Music, + Culture	**6**	Research & Investigation	4	Law & Crime	
Athletics	2	Community Contact	5	Hacking Software		History & Geography	
Combat	1	Riding & Piloting		Hacking Hardware		Physics & Engineering	1
Psionics	2					Chem & Molecular Bio.	1

Using two d10 dice instead of one d20

Mathematically, the game can be played with a d20 instead. We recommend two d10 dice because the result is biased towards middle values. A d20 has a one-in-twenty chance of rolling a 2, or a 10, or a 20. When rolling two d10 dice, the probability of getting an 11 is one-in-ten. The probability of getting a 6 or 16 is one-in-twenty. And the probability of getting a 2 or 20 is one-in-one-hundred. This makes the outcomes more predictable, rather than characters regularly wildly over- or under-performing their expectations on tasks.

> **Using Whatever Dice You Like**
>
> In addition to accommodating d20 rolls, the game can be run with 2d6 dice by adjusting the success threshold from 22 to 18. It can also be played using 2d8 rolls by adjusting the success threshold to 20.
>
> The game also accommodates "roll under" mechanics: the game was originally played by subtracting 2d10 dice rolls from Ability Scores, and designating any roll lower than the Ability Score a success! It works great, and this is the preferred way to play among some players.

Putting this all together

It should now make sense how a player would approach an attempt to detect deception. First, they would identify their best Attribute and Skill to find their Ability Score. For the character above, that would be Intelligence (9) plus Psychology (1), for a total of 10. They'd then roll 2d10. If they rolled a 5 and a 2 for a total of 7, that would add up to 17. Unless a beneficial modifier were applied, they would fail their check.

Adding a second skill

Players can add half a second skill (rounded up) if they have 20 minutes to prepare (and the GM allows it). For example, a player may roll Observation + Assess Tech + ½ of Arts, Music, & Culture if they're trying to analyze hidden messages within an audio recording and they can work on it for 20 minutes.

This is a good way to handle stealth. See Stealth for more details.

Determining Success

The default cutoff for success is 21, which is neutral. A roll of 22 is a success, a roll of 20 and below is a failure, and a roll of 26 or higher would be a decisive success. More detail can be found in Discerning Success within the Resources for GMs.

Players and GMs are advised to treat checks flexibly. If a player rolls a 22 but the GM doesn't feel like their performance in the moment feels sufficient, they should resolve the situation accordingly. And if a player rolls a 19, a GM may treat that as an underwhelming

success rather than a strict failure. GMs can say, “I’m going to apply a -2 modifier” and justify why they think that a roll of 22 still results in a failure, or they can simply describe what happens without having to create a mathematical pretense. The point is to tell a story, and as long as an outcome doesn’t feel irrational, it’s up to the GM to decide what happens in response to any particular total score.

Accommodating Varied Playstyles (or role-play vs. roll-play)

The authors of this game and our friends enjoy storytelling more than scorekeeping, and this is the playstyle reflected in the rules. For instance, as a GM, you don’t have to tell a player in advance that you’re applying a modifier, as long as you set the players’ expectations.

If a player reports that they passed a check by one and you report that their attempt to eavesdrop failed, they’ll likely feel betrayed if they believe that a total score of 22 or higher guarantees success. The solution is to make sure players understand that the game is art, not math, and for GMs to say ‘Yes, but’ more than ‘No’.

Let’s say you tell players to all make a roll for impressing an NPC. One may use [Knowledge + Psychology] while a second uses [Charisma + Art, Music, & Culture]. If the first rolls a total score of 26 and attempts to persuade the NPC using psychology, while the other rolls a 22 attempting to charm them over shared interests, we might describe the NPC responding more favorably to the second player despite a lower total score if it makes sense to the story.

You don’t even need to tell a player whether something constitutes “success” or “failure”. Consider their skill, consider the dice, consider the situation, and improvise according to your gut to deliver what you think is a satisfying storytelling experience for the players. This is the spirit in which these rules are written, but you do you.

Skill Check Examples

Winona is trying to pick a lock. She uses Dexterity (8) and Hardware Hacking (3), which adds up to 11. The player rolls a 5 and a 5 and reports that they've rolled a total score of 21. The GM reports:

"The lock is trickier than you expected. The pick's piezoelectric reader is reporting low confidence in the pin setting, forcing you to rely almost entirely on feel. You're able to get the lock open, but it takes nearly ten minutes. You don't have much time before Wayne returns from lunch."

~

Ricky Hands is attempting to avoid drawing attention to themselves, but the dunk-tank clown is a remarkably good troll. The player attempts to use Endurance (7) and Will (1) to act unphased by the clown's cutting jokes about Ricky's amateur body paint job. The player rolls a 7 and a 4 for a total score of 19. Recognizing that Ricky is about to lose their composure, Icicle uses the ability "Helping Hand" to give their ally a +4 modifier for a total score of 23. The GM reports:

"Ricky opens his mouth to begin yelling back at the clown, but Icicle steps in front of him and reminds him that the clown isn't worth it. Ricky makes a fist, then turns away and continues walking towards the big-top."

~

Orbweaver wants to know who could've set up the data sniffer outside Delegate Delgado's office. Their Intelligence is an 8 and they have 4 points in Assess Tech. The player rolls a 3 and a 5, for a total score of 20. The GM reports:

"You turn over the sniffer in your hands. Its construction is incredibly commonplace. The enclosure looks like the default enclosure style autogenerated by the most popular 3D fabricator programs. But you now have a scan of the microcircuitry and components. If you'd like, you can share that with the rest of your team to provide a +2 advantage to another player's Research & Investigation check."

~

Combining Skills with Prepared Checks

If a character is performing a task with more than 20 minutes of preparation time available the GM can choose whether to allow them to add half of another skill to their ability total.

Favored and Disfavored Checks

If a GM wants to improve or discourage success on a check, one alternative to applying a modifier is to have players roll twice and take the higher or lower of the two rolls. Rolling for a check twice and taking the higher value is called making a favored roll or favored check, and the opposite is a disfavored roll or check.

Letting Players Lighten the Load

Rather than try to keep track of every character's Ability Scores and calculate the outcomes of rolls, GMs are encouraged to ask players to do this math and then report the outcome. Similarly, GMs may find it preferable to ask players comfortable with the game to suggest what Skills and Attributes to use for a skill check rather than instructing them which to use. GMs may invite players to suggest things that they might see in a scene or politely ask, without embarrassment, that players roleplay lightly while the GM looks something up.

These examples are individually minor actions, but can have a large cumulative effect. The authors of Fully Automated want to see players previously too intimidated to try running games give it a shot, and learning to share the mental load with players is especially important when trying to create new GMs.

Experience Points and Leveling Up

As characters acquire experience points (XP), they can spend them on Abilities and Augmentations. These give characters special capabilities. Some allow players to perform a special action once per rest, while others modify a character's Attributes or alter what they can do within role play. The terms Abilities and Augmentations should be considered synonymous, and may appear in the text interchangeably.

Each Ability (or Augmentation) costs 30XP, and unlocks the next Abilities in its tree. Players can also spend 20XP to double an Ability they've already purchased. This allows a character to play an exhaustible Ability an additional time before resting., similar to the way additional spell slots allow the same spell to be cast an additional time between long-rests in DnD.

Players also have the option to spend 30 XP to add 1 skill point to any skill with four points or fewer. Players seeking to gain new combat actions can do so by increasing their Combat skill. They can then reselect their desired Combat Proficiencies with the assistance and approval of their GM.

Although both Abilities and Combat Proficiencies are both unlocked during character creation based on allotment of skill points (described under Abilities & Augmentations), increasing skill points with XP does not unlock new Abilities for free. It does unlock changing Combat Proficiencies that let players play attack actions without an automatic disadvantage. Maybe a character accidentally hurt someone, and decided to never draw a knife again.

There are no specific features associated with levels, but, informally, players' levels can be measured by every 100 XP acquired. Players with 100 - 199 XP are level one, 200 - 299 are level two, and so on. Generosity with XP is up to the GM's discretion, but in practice GMs using this system have typically afforded ~20 XP per session.

Creating a Character

Making characters is often one of the most appealing elements of an RPG, and Fully Automated aims to make the technical and narrative elements fun and easy.

Blank Character Sheets can be found here.

Premade character sheets can be found here.

A simplified low-formatting text-only character sheet can be found here. This is meant to be copied and pasted or written out by hand on lined paper.

The first page of the character sheets lists a character's attributes, skills, combat actions, special abilities, and a short biography.

The second page provides room for an extended character bio.

The third page is the Actions & Items page. This page provides a helpful quick reference for what items a character has on them and what actions they can perform. It's meant to help players easily remember the tools and abilities available to them moment-to-moment.

Character Concepts

Players are encouraged to look at the premade characters as a source of inspiration. Additionally, talk to the rest of a playgroup about what kind of contributions each player might offer and what similarities and differences in personality make sense. You may build a character around a set of abilities that seem fun to play, a personality that appeals to you, a simple gimmick, or just lifted from a work of fiction of which you're fond.

If creating a character that is a machine, refer to the section on Synthetic Intelligence in the world guide and Understanding Synthetic Intelligence in Inhabiting the World. If creating an intelligent animal character (also known as an e-species, parahuman animal or "parahuman") refer to the section on Animal Uplifting & Enhancement in the World Guide and the section on Understanding Parahumans in Inhabiting the World. In either case, use the character creation instructions as you would for a human character while making changes as necessary.

Most players can list as their sapience "S5". This is the category for basic human consciousness. Players are welcome to play as non-hominid and/or lower-sapiance characters like an heirloom dog, puma, parrot, beehive, or delivery drone. For advice on playing characters that don't have the full level of intelligence common to humans, synths, or enhanced chimps, see the section on Understanding Sapience.

Attributes

Attributes are the seven stats which players add Skill points to when rolling for checks. Additionally, the Strength, Dexterity, and Endurance Attributes determine a character's health points and speed.

Players have 49 points to allocate between their Attributes, with each having a minimum of 4 and a maximum of 10. An easy way to allocate these is to start by assigning a value of 7 to all of them and then moving points around while keeping all attributes within the 4 - 10 range until satisfied. Attributes can exceed 10 with augments, and max out at 12.

Strength - Strength describes a character's ability to apply brute force, both physically, mentally, and spiritually. Players use Strength to push and heave as well as summoning internal strength to overcome fear or doubt.

Dexterity - Dexterity is the ability to apply precise, controlled finesse. It can be used for whole-body movement such as parkour or fine motor tasks such as surgery.

Charisma - Charisma is the ability to express oneself in an intended manner. It can be used to charm or seduce, or it can be used to irritate, intimidate, or offend (if so desired).

Intelligence - The Intelligence attribute describes a character's ability to apply reason and process information. Intelligence can be used to infer, synthesize, analyze, and deduce.

Observation - Observation encompasses a character's ability to collect information from the world around them. It can be used to see, hear, taste, and smell. It can also be used to recognize patterns, interpret body language, or apply technical skills to extracting signals from noisy data.

Knowledge - Knowledge is a character's access to preexisting factual information. Knowledge allows a character to recall lessons in biology from their schooling and who on the block is the local yenta. Within Fully Automated, there is a much more fluid connection between personally remembered facts and information stored widely in publicly available databases or collective knowledge. So Knowledge can be used by a player both for direct recollection as well as to perform a quick look-up or to phone a friend.

Endurance - Endurance is a character's ability to withstand an assault. It can be a physical assault or an assault on the senses. Endurance can be used to perform an attempt to avoid being thrown off by a strong wind, withstand self-doubt, or weather discouragement.

A character's starting number of Health Points (HP) is their Strength plus twice their Dexterity, and their Speed is their Strength plus twice their Endurance.

Ability Points	Consequence
4	**Very poor.** Likely the worst in any crowd of 100 random people.
5	**Poor**. Typically the worst in any random group of 10 people.
6	**Below average**. Likely to rank 7th or 8th in a crowd of 10.
7	**Average**.
8	**Mildly above average**.
9	**Very good**. Significantly above average. In the 90th percentile.
10	**Great**. In the 95th percentile.
11	**Incredible**. Likely the best in any crowd of 100 people.
12	**Legendary**. In the 99.9th percentile.

Skill Points	Consequence
0	**Below average**. Totally unskilled.
1	**Average** for someone with little or no experience.
2	**Mildly above average**. Average for someone with any practice.
3	**Above** average. Capable.
4	**Proficient**. Professionally qualified. In the 75th percentile.
5	**Excellent**. Holds a reputation amongst peers. In the 85th percentile.
6	**Exceptional**. Qualified to teach the skill. In the 90th percentile.
7	**Expert**. Able to advance their field. In the 95th percentile.
8	**Master**. In the 99th percentile.

Total Ability Score	Performance at a given task
4	**Abysmal**. Unlikely to succeed even with assistance.
8	**Just about average**. Success is unlikely but very possible.
10	**Better than average**. Equally likely of success or failure at a challenging task.
12	**Very good**. Fully capable of a given task under routine conditions.
14	**Excellent**. Usually capable even under complicating circumstances.
16	**Gifted**. Likely capable even under extreme circumstances.
20	**World-class**. Capable under nearly impossible conditions.

Min-Maxing

Players are advised to start with attributes between 5 and 9 if they'd like to play as a balanced character. Giving a small set of attributes values of 4 and others of 10 is liable to create characters which are effectively hopeless at certain tasks and guaranteed success in others. Whether this is fun for the player, the rest of the table and the GM is subjective, but as with everything, it's up to each GM and their table.

Skills

Skills are used by adding a relevant Skill to a relevant Attribute to define the character's Ability Score for the task in question. Players roll 2d10 dice and add the result to their Ability Score along with any modifiers to determine their degree of success. It is up to the GM's discretion to adjust the ability rating with modifiers appropriate for a situation and to interpret what the resulting rolls mean in terms of the story.

Strength	Dexterity	Charisma	Intelligence	Observation	Knowledge	Endurance

Empathy		Acting		Situational awareness		Psychology	
Care		Charm		Detection & Analysis		Medicine	
Stealth		Intimidation		Assess Tech		Wilderness	
Will		Art, Music, + Culture		Research & Investigation		Law & Crime	
Athletics		Community Contact		Hacking Software		History & Geography	
Combat		Riding & Piloting		Hacking Hardware		Physics & Engineering	
Psionics						Chem & Molecular Bio.	

The Skills offered are meant to offer a useful set of actions and subject matters that allow characters to contribute to a variety of situations. They are meant to be interpreted creatively, which is why Skills are not tied to a specific Attribute. Empathy can be based on Intelligence or on Strength. A player attempting to sneak across an area could rely on Stealth and Dexterity to move acrobatically or Charisma to blend into a crowd. Skill in Art, Music, & Culture could be applied using Dexterity to perform a dance, Knowledge to understand the historical context of a poem, or Intelligence to compose music.

Players get to select one Skill to which they apply 8 points, one to which they apply 7 points, and one to which they apply 6 points. They then pick three skills to which they apply 5 points, 4 points, and 3 points. Finally, they may pick four skills to which they apply 2 points and 1 point.

8 pts	1 skill
7 pts	1 skill
6 pts	1 skill

5 pts	3 skills
4 pts	3 skills
3 pts	3 skills

2 pts	4 skills
1 pt	4 skills

The available skills and examples of their use are described below. GMs should be comfortable suggesting the relevant skill for an action but are also encouraged to invite players to suggest skills and attributes which they think would be fitting, provided that they can explain how they'd go about applying the skill they propose.

Athletics - Roll an athletics check to perform feats of physical prowess. Roll Strength + Athletics to pull open a heavy gate, or Dexterity + Athletics to grab on to an awning while falling.

Riding & Piloting - Roll for Riding & Piloting whenever a character employs their acumen in controlling a vehicle. Roll Dexterity + Riding & Piloting to steer a flying disk out of the way of an oncoming vehicle, or Charisma + Riding & Piloting if trying to convince another character of ones' acumen at piloting a catamaran.

Stealth - Stealth includes any activity meant to be done in a discreet manner. Roll Dexterity + Stealth to enter a building through a skylight without being detected. Roll Charisma + Stealth to blend into a crowd.

Empathy - Empathy is the skill of emotionally understanding sapient creatures and making them feel understood. Roll Strength + Empathy to disarm an aggressive person in a state of distress. Roll Knowledge + Empathy to predict the actions of another character.

Will - Will is the resolve that allows one to impose one's desires into the world through the power of their determination. Roll Endurance + Will to swim through an icy river. Roll Charisma + Will to rally a crowd.

Combat - The primary purpose of the combat skill is to determine how many points a player can spend on Combat Proficiencies. But this skill could still be used outside of a combat encounter by rolling for Strength + Combat to tackle someone in a bar fight or Dexterity + Combat to dodge an attack if fighting occurred outside of a planned combat encounter. One could also roll for Observation + Combat to interpret what happened when surveying a scene after a fight took place.

Psionics - Psionics applies whenever a character wishes to make use of their proficiency with empathic mental abilities or related topics. Roll Intelligence + Psionics to tune a mindscape in neurospace. Roll Endurance + Psionics to resist a psionic attack.

Acting - This skill allows players to convince an audience of whatever the player is trying to convince them. Roll Charisma + Acting to successfully deceive with a lie. Roll Observation + Acting to assess whether someone is concealing something.

Charm - Charm is a character's ability to persuade through positive encouragement. Roll for Charisma + Charm to earn a wary stranger's trust or to rally a group to follow you. Roll Intelligence + Charm to try to flatter someone based on a deductive assessment of their interests.

Intimidation - Intimidation is a character's ability to persuade through negative pressure. Roll Charisma + Intimidation to convince another character to stop doing something based on the fear of legal consequences or damage to their reputation. Roll Strength + Intimidation to perform a physical feat intended to frighten a character into cooperating.

Art, Music, & Culture - This skill allows characters to make use of their understanding and appreciation of elements of culture. Roll Intelligence + Art, Music, & Culture to interpret clues hidden in a painting. Roll Knowledge + Art, Music, & Culture to demonstrate cultural literacy in a sensitive diplomatic situation.

Community Contact - Community contact is the skill of knowing people and being known. It describes the size of a character's social network and their ability to rely on friends and friends-of-friends for aid. Roll Knowledge + Community Contact to know who in a neighborhood is likely to have an ear to the ground. Roll Charisma + Community Contact to build trust with a character based on reputation or shared acquaintances.

Care - Care is the skill of performing physical tasks associated with care as well as the mental and emotional acts of care. Roll Intelligence + Care to identify medicinal herbs and roots in the wild, or Charisma + Care to reassure a grieving person. Skill points in Care are also used to determine the HP a character can restore through healing actions.

Situational Awareness - This skill allows characters to take in and integrate a holistic understanding of their surroundings. Roll Observation + Situational Awareness to passively perceive things about a moment, from threats to concealed passages. Situational Awareness is the most common skill employed when entering a new environment to perceive the world around you, however it is meant for observing things passively or in a broad sense rather than deliberately or narrowly searching for something.

Detection & Analysis - Detection & Analysis is an observational skill used for observing specific things with high sensitivity, whether through natural or technological sensors. Roll Observation + Detection & Analysis to attempt to follow a scent, hear a faint sound, or detect the faint radio signature from a hidden device. Detection and Analysis can be used as a substitute for Situational Awareness as a player's typical roll for perceiving new environments, however they'll need to specify what they're focusing their attention on, and information given may be more quantitative in nature.

Assess Tech - This skill is used to examine and understand technology and apply that understanding. Roll Intelligence + Assess Tech to figure out how a mysterious device operates. Roll Observation + Assess Tech to obtain advantage for a character or their ally before attempting to disable a dangerous device.

Research & Investigation - This skill is used to learn more about a subject through searching and integrating recorded information. Roll for Intelligence + Research & Investigation to understand a complex scientific theory. Roll for Knowledge + Research & Investigation to find and interpret news stories about a person, group, event, etc.

Hacking Software - This skill is used to employ a character's acumen in understanding and manipulating software and data transmission. Roll Intelligence + Hacking Software to attempt to decrypt files a character is not supposed to be able to access, or Observation + Hacking Software to identify a backdoor in a system.

Hacking Hardware - Hardware hacking operates similarly to Hacking Software, but applies to physical techniques. Roll Intelligence + Hacking Hardware to disable a bomb, or Dexterity + Hacking Hardware to pick a physical lock.

Medicine - The medicine skill aids any task that relies on a character's knowledge of the field of medicine. Roll Knowledge + Medicine to diagnose a condition. Roll Dexterity + Medicine to perform surgery. Along with Care, the Medicine skill determines how many points a character can restore when healing someone.

Law & Crime - The Law & Crime skill is another subject matter knowledge-based skill. Roll for Knowledge + Law & Crime to know what legal consequences might apply to a given action. Roll Intelligence + Law & Crime to devise a legal strategy, or Charisma + Law & Crime to negotiate a contract.

Psychology - The Psychology skill allows characters to apply an understanding of cognition and behavior to understand and persuade sentient creatures. Roll Observation + Psychology to assess a character's state of mind or Intelligence + Psychology to identify what kind of appeal a character might find most persuasive.

History & Geography - The History & Geography skill assists with any check that requires a factual or intuitive understanding of the past events that shape the present and the landscape, within which all such events transpire. Roll Knowledge + History & Geography to understand the context that informs why a character of a given identity group is distrustful of a specific profession. Roll Observation + History & Geography to find a secret building entrance through a forgotten subway access tunnel.

Wilderness - The Wilderness skill applies to actions used to live and survive when cut off from most of the built world. Roll for Dexterity + Wilderness to start a campfire, or Intelligence + Wilderness to navigate by the stars.

Physics & Engineering - The Physics & Engineering skill is used to complete checks that require an understanding of mechanical, electrical, optical properties that shape the world. Roll Intelligence + Physics & Engineering to attempt to bounce a radio signal off a canyon wall to reach a target. Roll Strength + Physics & Engineering to apply leverage to move a heavy fermentation tank blocking a pathway.

Chem & Molecular Bio. - The Chem & Molecular Bio skill assists with checks that depend on an understanding of chemistry and microbiology. Roll Intelligence + Chem & Molecular Bio to determine the function of a protein-coding gene. Roll Endurance + Chem & Molecular Bio to make dietary choices to stave off dehydration if stranded in the wilderness.

Jacob Coffin

Special Skills

The following skills are notable for offering additional effects or having an outsized value.

Combat - The combat skill determines how many points players have to spend on selecting Combat Proficiencies. The cost of these proficiencies are described in the Combat section. Players may also take a combat related ability for every 2 pts allotted to the combat skill.

Athletics - For every 2 points they assign to the Athletics skill, players may take an Ability from one of the following: Endurance-Based Augmentations; Athletic/Threat-Based Augmentations; Strength and Dexterity Abilities; or Respiration-Based Augmentations.

Psionics - Players may take a psionic ability for every 2 points they assign to the psionics skill. For instance, if a player assigns 8 skill points to psionics they can select four psionic abilities. GMs are encouraged to consider limiting players to selecting among the first level of psionic abilities after Awaken during character creation.

Law & Crime; History & Geography; Physics & Engineering; Chem & Molecular Bio - For every 2 points placed into these skills, players can take one ability from Reason and Learning Abilities, Assistance Abilities, or Skill & Ability-related abilities. Points can be distributed across these. For instance, a player who assigns 1 point to all four can select two abilities from the options listed.

Medicine and Care - Points in medicine and care are used to heal characters. Healing actions can be performed with minimal resources using the standard skill check mechanic. If using a standard medical kit containing medicinal putty, however, the number of health points restored is equal to the sum of these two skills.

Charm; Empathy; Psychology; Community Contact; and **Situational Awareness -** These five skills have been some of the most frequently used in gameplay. Their outcomes may not always be significant, but players should be aware when selecting skills of the outsized role that these five often have based on their frequent use and broad utility.

Growth-focused character creation

The default skill allotments are intended to help new players start the game already feeling accomplished in the way that many players will start a game of D&D by creating characters already at their second or third level.

If readers expect to play a long campaign in which their characters progress from unnotables to legends, players are encouraged to start by giving themselves three skills with 6 points and no 7 or 8 point Skills and letting players build Skills up to eight points gradually by spending experience points on increasing Skill points.

Custom Skills

Players and GMs aren't limited to the skills listed on the character sheet. Anyone using this system is encouraged to modify or replace any skills with ones that make more sense. It's for this reason that the skill list on the character sheet includes two blank spaces. GMs interested in encouraging players to propose interesting specialty skills may wish to offer a 1 point bonus to up to two custom skills (which meet with their approval, obviously).

Here are some example custom skill options:

- Prestidigitation
- Horticulture
- Non-human Animal Connection
- Mathematics
- Clowning & Pantomime
- Knot Tying
- Logistics
- Fire Spinning

Character Types

The world of Fully Automated is a character classless society: the game doesn't use character classes in a formal sense, since it conflicts with the themes of human variety, identity detached from profession, and of open-ended character self-actualization. But if you're looking to be useful in a group, here are some character types that describe traits that are well suited to round out a party.

Hacker

You like to manipulate the technosphere around you to gain entry, control, or advantage. Sometimes hackers specialize in modifying electronics and other physical devices, and sometimes in network penetration and code.

Recommended Skills: Hacking Software; Hacking Hardware; Assess Tech; Detection & Analysis; and/or Physics & Engineering

Recommended Stats: Intelligence; Observation; and Knowledge.

Tinkerers, engineers, technicians, and any curious characters make great hackers.

Investigator

You see what others miss and draw out data where others see noise. You can bring the hidden into the light and make sense of mysteries.

Recommended Skills: Situational Awareness; Research & Investigation; Detection & Analysis; Assess Tech; Community Contact; and any subject matter expertise

Recommended Stats: Observation; Knowledge; and Intelligence.

Detectives, journalists, and puzzle-solvers make great investigators.

Healer

You restore the injured. Sometimes it's in a clinic. Sometimes it's unexpectedly out in the world. And sometimes you're friends with people who get into situations that require a lot of urgent care. Some healers depend more on brains, and some more on heart.

Recommended Skills: Care; Medicine; Chem & Molecular Bio; Empathy; and sometimes Physics & Engineering.

Recommended Stats: Intelligence; Knowledge; Observation, or Strength.

Doctors, medics, clerics, nurses, therapists, social workers, and general care givers all make good Healers.

Negotiator

Growing up, you were told to "use your words", and you've found that really works for you. You know people, culture, and what to say. You pay attention to those you interact with and demonstrate high emotional intelligence to find solutions to problems you encounter.

Recommended Skills: Charm; Intimidation; Acting; Art, Music, & Culture; Empathy; Psychology; Community Contact; and possibly Psionics

Recommended Stats: Charisma; Observation; and sometimes Knowledge or Strength.

Actors, lawyers, government delegates, union reps, and other positions that require cooperation make natural negotiators.

Knower

In a world overflowing with data, some people don't quite appreciate the purpose of storing a mind full of facts. But besides paying off when a situation doesn't allow for a cyberspace search, you know that data isn't knowledge until it's understood. The difference between grasping the world and floating into ontological relativism is context. Who? What? Where? When? Why? How? As Decartes observed, to think is to be. And you like to be.

Recommended Skills: Research & Investigation are highly recommended; along with Community Contact; Art, Music, & Culture; History & Geography; and any of the other subject matter skills

Recommended Stats: Knowledge & Observation

Archivists, Librarians, Analysts, and Scientists make good Knower characters. Highly technical workers like supply chain analysts with a hobby interest in one or more esoteric liberal arts are a fun way to be the character in a group who has the most understanding of the game world's inner workings.

Athlete

Your body is a tool. With it you can go places, do things, survive and thrive. You take care of your physical form to keep it ready to serve any need. Whether you're racing a mountain bike down a forest trail or leaping between rooftops, you trust your muscle, bone, and/or metal to take you where you need to go.

Recommended Skills: Athletics; Will; Riding & Piloting; Stealth

Recommended Stats: Strength; Dexterity; Endurance

Competitive athletes, physical trainers, dancers, outdoor enthusiasts, adrenaline junkies, explorers, firefighters, construction workers, or anyone else who enjoys pushing their limits or challenging themselves can make good athletes.

Fighter

The last arena of conflict resolution is physical resolution, and you prefer not to be at a disadvantage when such situations arise. Maybe you believe that projecting your ability to face violence is the best tool of discouragement. Maybe you find joy in the challenge or the movement. Or maybe you just think civility is a pretty myth humans tell one another. Fighters can exhibit a variety of styles, such as unarmed, melee, or ranged. Make sure to talk to the GM to determine whether a Fighter will be useful to a campaign.

Recommended Skills: Combat and Athletics

Recommended Stats: Strength; Dexterity; Endurance

Most characters who would make good athletes would also make good fighters, though characters who enjoy confronting conflict or who have a passionate moral alignment are especially suited. Adventurers, monks, and other clergy members may make good fighter characters. Soldiers and other military characters are a natural fit, but be sure to review the culture of armed forces with other players and make sure your character concept won't create unwanted friction at the table.

Assigning Skills and optimizing characters

When deciding which skill points to assign to which skills, players may recognize that the desire to accurately reflect what a character is best at comes into conflict with efforts to assign skills in a way that makes a character successful within gameplay. A character's backstory may imply that they're strongest skills are in a series of subject matters. Players may be conflicted about reflecting this if these skills happen to be far less commonly used than many others. We recommend these two approaches:

Option A: first select the overall set of skills that fit the character, then assign points within them in whatever way seems likely to make them successful at gameplay. For instance, they may be an expert martial artist who is pretty good at hacking, but you can still give them 8 points in hacking and just 5 in combat if that gives you the move set that you want. Players are under no obligation to make their ranking of abilities directly match their relative ability levels at various tasks. The skill sheet is a tool to play a character in a way that feels fun and makes sense, so as long as they're not incompetent at something for which they're supposed to have mastery, the relative rankings shouldn't matter.

Option B: don't worry about gameplay. Assign skills as authentically as possible and disregard how this will impact play. The difference of a few points probably won't radically impact your experience of playing the game, and will be fun either way.

We prefer option B. In the process of making the template characters for the game, though, we've applied option A.

Creating your character's backstory

The biographical section on the first page of the character sheet is meant to help guide players in imagining who their character is and communicating that to others. It begins with a space to describe **Family, Neighbors, and Acquaintances**. Players should use this space to describe who makes up their closest circle of trust. These are the people that often define how we are shaped and viewed by the world.

The second space is for a ***Curriculum Vitae***. In the present day, a CV is commonly used in academic jobs in place of a resumé. It is latin for "course of life" and players are encouraged to list out their characters' academic and professional path in a way that explains what roles they generally serve. A CV may tell a story of someone who excelled academically and then pursued a traditional career in medicine, law, science, etc.. However it may also describe someone of varied passions or an aversion to narrow commitments who has chased many interests through unconventional paths. It is assumed that studying and performing are not distinct, and that characters are not expected to regiment their lives into separate eras of learning and doing. For examples of how a CV may look, refer to the template characters.

Next to **followers**, players are encouraged to list the size and style of their social network. Details can be found later in this section under Followers. More information on social media can be found in the section Inhabiting the World under Social Media.

After that is a space to describe a character's **living arrangement**. Similar to one's family and friends, where one lays their head at night heavily shapes the groove they carve in the world, and that which the world carves in them. Players may live in an apartment in the city with family; on a productive commune; in a minimalist basement where they spend most of their time in cyberspace; at a professional residence like a fire station; living nomadically out of a vehicle or on friends' couches; and so on.

The final space is a general one for listing equipment they favor or a short explanation of what they're about.

Family, Community, & Living Arrangements

All of this is for roleplay purposes. This game is meant to immerse players in a different way of living life. In Fully Automated, it is assumed that characters have a strong and healthy social network that meets their needs. For some, that may mean four generations of biological family and inlaws living on a shared floor of an apartment tower. For others, that could be a best friend who they hang out with mostly in cyberspace and a neighbor who checks in on their cat while they travel. When you sit down to play, ask who you see regularly. It could be a barista, a food cart vendor, an animal companion or a chess group that meets in the park. In order to play as a person connected to their community, ask where you lay your head at night and who would be the first person to notice if you disappeared.

Familiars

Players may wish to have a synth assistant or animal companion. Both are encouraged. All that is necessary is that they give familiars a name and describe their physicality to allow the GM to incorporate them into the story. If the player has a combat-capable animal companion like a dog, that companion is assumed to be able to play the Claw attack. This is a renamed version of the “Trained Strike” attack.

Education, Roles, & Associations

How a character has dedicated their time in the past and present says a lot about what is important to them. It tells us what interests or roles they invested in learning and performing. Additionally, who you affiliate with helps establish a character’s form of interaction with various communities. For the CV section, players are encouraged to ask how they arrived at who they are. They likely started out being shaped by a home life with family and an educational experience. From there, most people begin to discover their unique path. It may be a deliberate path to which they dedicated early, or it may be a confusing set of twists and turns. They may have significant formative experiences, such as seeing a certain work environment or meeting someone who inspired them to pursue the same calling. Players should imagine how, in a world that prioritizes giving all young people access to education and tools to self actualize, their character grew from childhood. Add jobs, degrees, achievements, or just descriptions of experiences as desired.

Below is a sample of organizations that players may find useful as inspiration for what kind of roles a character may fill in their community that make sense in an adventure context.

Protection Agencies & Other Service Organizations

Volunteer protectors fill the crisis-response role currently filled by police officers. These protection agencies offer structural benefits and justification for players to be called into emergencies that can be very useful to players (and GMs). See Service Organizations for details.

The **LA Protectors League** (LAPL) is a well-disciplined organization of volunteers regularly trained in de-escalation and preservation of light and life.

The **Free Protectors Network** (FPN) is a loose confederation of authority-skeptical protectors with standards of conduct that are as high as (or arguably higher than) the more mainstream protectors league, but with broad latitude in tactics.

The **LA Civilian Order of Protectors** (LACOP) is a traditionalist protector's league that is mostly meant to offer potential antagonists, though players are free to join it if it suits them.

Medic and Firefighter networks aren't defined as specifically in the text as the protector agencies, since it's assumed that there isn't as much politics or ideology tied up with these kinds of services as those that may encounter or employ violence. But players who play as a medic or firefighter are still encouraged to communicate cultural signifiers through the network they affiliate with. This can be done by associating with one of the protector networks, a spiritual or religious institution, a specific neighborhood, etc.

Medical or Scientific Affiliations

Players who are members of medical networks, care collectives, hospitals, clinics, universities, labs, scientific bodies, etc. can leverage these connections for access to data, expert assistance, and advanced scientific or medical equipment.

Unions

Membership in unions provides a trusted connection to a wide array of frontline technical experts embedded everywhere, keeping essential goods and services flowing.

Liberty Compact Signatories

Signatories to the Liberty Compact agree to ways of interacting with other signatories that modify the social contract between themselves. They authorize certain behaviors that are otherwise prohibited (such as dueling) and prohibit certain behaviors that are otherwise authorized (such as calling on protectors other than affiliates of the Free Protectors Network). Having a player in a party who is a member of this ideological affiliation may provide fun character moments and advantages in negotiating with others of the same persuasion. See The Liberty Compact for more information.

Deep Roleplay Associations

In a world of leisure, there are a lot of Live Action RolePlay groups. If a character engages in a frequent (or fulltime) roleplay as a werewolf, time traveler, soldier in the Global Climate Wars, furry or member of the fae, they can justify connections to like-minded make-believers. Which, as we all know, extend invisibly across every social strata and through all halls of power.

The second page of the character sheet

The second page of the character sheet is meant to provide plenty of space to expand on who the character is and how they became that person. Much of the information is redundant with the first page, but with less of a constraint on space. Players are encouraged to write out a succinct biography of how they came into the world and how they've navigated it since.

The second section invites players to say more about their community. Players may wish to say more about the personality of their close connections or list a greater number of them. It can include key individuals as well as groups. Players are strongly encouraged to think hard about their extended community in real life and draw inspiration from what they like and what they might improve. They're also welcome to describe heartbreaks and traumas. Even in a better world, neglect, abuse, abandonment, and loss will happen from time to time.

Below this is a section to describe drivers of action: goals, motivations, and weaknesses. Following this is a space to list violations they may have committed. Lastly, there's a space to write augmentations and abilities a player might want later.

Often, players wish for something in game, but have trouble remembering these when it's time to spend XP. Players can write these here to help remind themselves later.

Goals, Motivations, and Vulnerabilities

Characters' goals, motivations, and vulnerabilities provide narrative fuel for the players and GM. They help players apply their characters' ideological investments and relationships to the situations they encounter, and offer GM's tools to make a story personal to each character.

Motivations

Players are encouraged to invent or mix motivations. The key element of a motivation is that it is stronger than self preservation. This allows players and GMs to understand what would inspire a character to face down danger, and what concepts a character would find emotionally impactful. Example motivations include:

- Ego or pride
- Justice or other principles
- Artistry
- Material gain
- Curiosity
- Reputation with a person or a community
- Love for a person, thing, or group

Vulnerability

Players are encouraged to propose at least one undesirable quality which can undermine a character's interests. A vulnerability may be a tendency that runs against a character's better judgment, a feature susceptible to exploitation, or a condition that could make the character desperate. Good vulnerabilities are ones that:

- Help the player and other participants get to know a character more fully
- Justify a character's actions, especially when they are ill-advised
- Make sense in complement with their strengths

Present Goals

A character's present goals are specific, achievable occurrences which they can pursue within a session, such as collecting a souvenir for their son to fulfill a promise, or trying to get a date. These present goals can make good B-stories during a quest. They give players additional things to think about and affect how they interact with the world. They offer ways to tie a generic story into things that are personal to characters, or possibly highlight that the players have larger personal lives that take place beyond the mission itself.

Long-term Goals

Long-term goals help all participants understand their character's hopes and dreams. It also offers GMs a roadmap on how to tie games into a player character's development. Unlike short-term goals, these are not things a player could achieve during a game, however GMs may find ways to present players with serendipitous events that may provide some relevance to the character's life-long ambitions.

As an example, if a character dreams of one day becoming the chair of the International Society of Investigators, the GM could establish that the ISI has an internship program for someone at the character's professional level, and then make some criteria of the application fulfillable within a game session.

Violations

The character sheet includes a space to describe actions in the past for which a character has faced rapproch. These can be relatively minor transgressions or serious misdeeds. They may be the result of a mistake, a moral failing, a misunderstanding, or a principled stand. Violations round out characters by highlighting blemishes or messy parts of their past. They're optional, but included in part to recognize the normalcy of rule violations. This game assumes that a better future is not one totally free of misbehavior, but rather one that prioritizes correction and context. It's a world that has discarded a framing that sorts people into criminals and innocents and recognizes that people who contribute to their community are also sometimes people who occasionally fall on the wrong side of a social boundary line.

Followers

A character's follower count describes the size and shape of their social network. Follower counts are appended with the label "Public", "Quasi-Private", or "Restricted" (or just a P, Q, or R) to indicate how public a character's presence is online. There is an expression that "A hard ten is worth more than a soft hundo." A player who wants a large social network can attain a hundred thousand followers without too much difficulty. However players who don't want that level of attention can still have a strong, dedicated circle of close-knit followers.

Comm. Contact	Public	Quasi-private	Restricted
0	200 *A regular person living publicly with no significant influence*	100	0 *Offline*
1	1,000	300	100 *Someone communicating online exclusively with familiars*
2	5,000	1,000 A relatively private person well known to friends and neighbors	200
3	15,000 *A casual content creator sharing memes & occasionally interesting personal content*	3,000	500
4	50,000	10,000	1,000 *An admired figure who eschews digital tools*
5	200,000	25,000 *Someone well-known within their profession who doesn't seek attention*	4,000
6	1 M *A consistent content creator or local leader*	50,000	10,000
7	10 M	100,000 *A figure renowned within a community who limits their presence to that community*	20,000
8	100 M + *A celebrity or international leader*	200,000	50,000 *The leader of a secretive underground revolutionary group or a cult*

Follower counts exist for roleplay purposes. There are no gameplay benefits to follower counts or restrictions on what follower count a character can have. That said, the table above offers examples of follower counts based on a character's Skill level in Community Contact. This chart is meant to assist players in creating characters as well as assessing what a given follower count might imply about non-player characters they meet. For more insight into what different follower counts and different levels of public accessibility look like, see the section on Social Media under Inhabiting the World.

Abilities and Augmentations

Augmentations and special abilities allow players to perform unusual and unique feats. From a gameplay perspective, these are provided in a typical RPG skill tree that allows players to spend XP on things that can allow them to do more and cooler stuff. Each ability or augmentation is recommended to cost 30 XP, and GMs are recommended to offer players 100 XP during character creation, with the expectation that they'll earn around 15 - 25 XP per session. This would enable players to obtain roughly two new abilities for every three sessions played. We can't emphasize this enough, though: GMs should give out XP and abilities at whatever pace feels fun. If you want to tell a story of players who transform from unremarkables to legends, start with no XP. Or try running a session where all the players (and adversaries!) start out completely OP like Goku.

Picking abilities and augmentations during character creation

During character creation, several skills offer abilities based on the number of Skill points allotted to them:

- For every 2 points invested in the **Combat** Skill, take 1 **Combat Ability**
- For every 2 points invested in the **Psionics** Skill, take 1 **Psionics Ability**
- For every 2 points invested in the **Athletics** Skill, take 1 **Athletics Augment or Ability**
- For every 2 points invested in Law & Crime, History & Geography, Physics & Engineering, and Chem & Molecular Bio (all added together), take 1 **Mental ability**
- If you're a Synth, substitute **Synth Augments** where appropriate

Example: if you have 4 points in Combat, take 2 combat Abilities.

If you have 1 point in each of Law & Crime, History & Geography, Physics & Engineering, and Chem & Molecular Bio, take two mental Abilities.

On top of these, pick out any other abilities or augmentations your GM offers you through starting skill points.

Disambiguating Terms

To clarify some of what we've covered:

Attributes are a character's core stats, like Intelligence and Charisma. **Skills** are specialties that add points to a character's Attributes based on the task they're trying to perform. **Abilities & Augments** are special abilities or modifications to a character that allow them to do a unique action once per day (when rested) or otherwise modify the character. **Combat Proficiencies** (or weapons proficiencies) are the weapons or martial arts capabilities that a character can play without an automatically imposed disadvantage.

Combat Proficiencies

Once you've established a character's skills and backstory, you'll likely want to consider how useful they'll be in a fight. Some players and GMs love fighting and some don't, so discuss with your GM and the rest of your table what they like.

The combat proficiencies available to players are based on the total number of points they have in the Combat Skill. Combat Proficiencies each have a cost, and players can take whatever Proficiencies they wish within the number of skill points available. Players do not require proficiency to wield a weapon, but doing so imposes disadvantage.

A good rule of thumb is that assigning at least 2 points in Combat is recommended if a player wants to be able to do anything more than defend and run.

You can see a list of attacks and their Skill cost below. The threat profile and concealability ratings are suggested for roleplaying purposes, and have no defined effect.

Cost	Attack	Range	Weapon	Threat profile	Portability / Concealability
0	Punch	1	No	Very Low	High
0*	Claws	1	No	Very Low	High
0	Spray	2	Yes	Low	Medium
0.5	Knife	1	Yes	Low	Medium
0.5	Club / Improvised melee	1	Yes	Low	Low
0.5	Pistol	4	Yes	Medium	Medium
1	E-baton	1	Yes	Low	Medium
1	Slingshot / Nanodart (includes Pistol)	5	Yes	Medium	Medium
1.5	Shortbow/Crossbow (includes nano)	4/8	Yes	Medium	Very Low
1.5	Microdarter / Rifle (Includes proficiency with pistol)	6	Yes	Medium High	Very Low
1.5	Whip	4	Yes	Medium	Low
2	Trained Strike (includes e-baton)	1	No	Very Low	High
2	Sword (includes e-baton and club)	1	Yes	Medium	Low
2	Bo Staff / Spear	2	Yes	Low/ Med	Medium
2	Improvised throwable	4	Yes	Low	High
	Shuriken/Throwing knives			Medium	Medium
2.5	Glue Gun (includes proficiency with all gun weapons)	5	Yes	Medium	Very Low

Using Abilities and Augments

The features in the Abilities & Augments trees come in three kinds:

Exhaustible Abilities are abilities that can be used once and then are depleted until they are recharged through rest. If a player has two of the same exhaustible ability, they can use each one of them once independently between rests. In the trees below, they are color-coded yellow with a solid border.

Passive Mechanistic Abilities are abilities or augmentations that impose a permanent, ongoing effect, such as increasing a base attribute or a skill, or increasing movement distance in combat. These are color-coded in the abilities trees in green, with a heavy dashed line.

Non-mechanistic Abilities are abilities that provide roleplay benefits. These list no change to dice rolls, but GMs should interpret them to impact play however they see fit. These include things like being able to breathe underwater or generate ATP from photosynthesis. They are color-coded in blue with a fine dashed line.

Creating Custom Augments

The list below is meant to provide inspiration but not limitation. Feel free to propose any Ability or Augmentation that appeals to a player and is allowed by the GM.

Gender and Sexual Augments

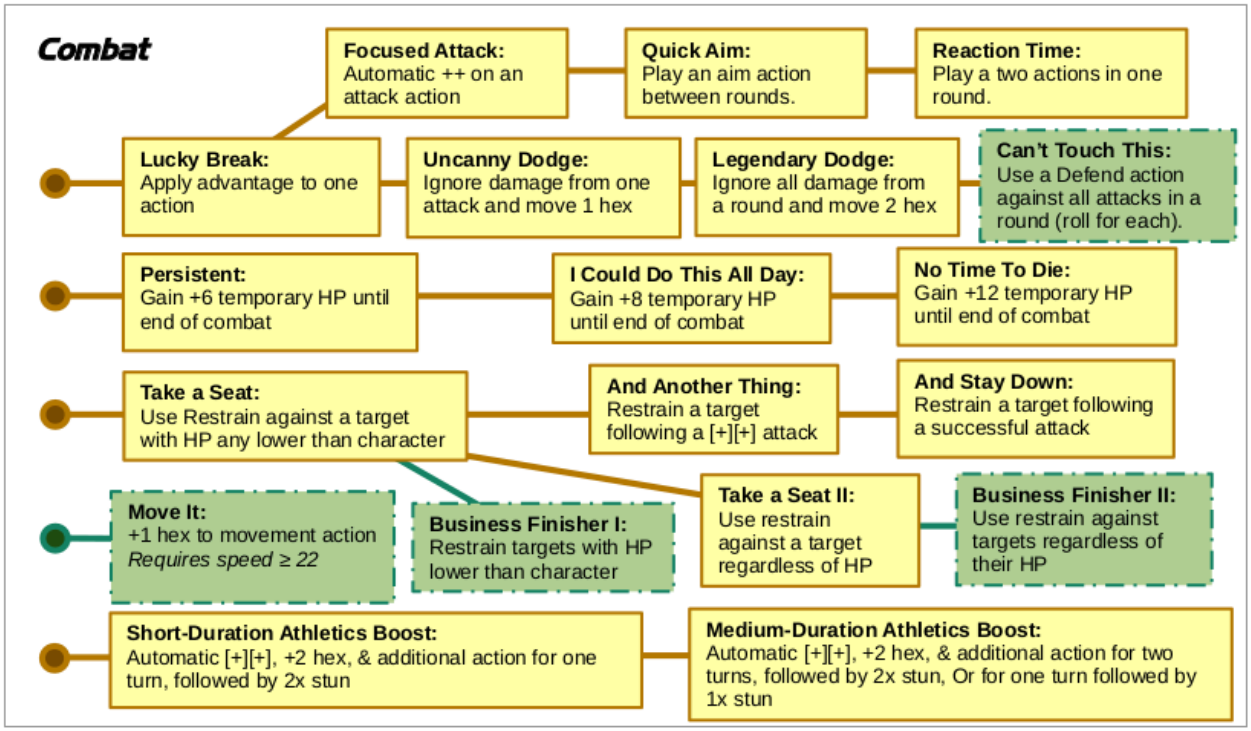
Listed Augmentations don't include sexual augmentations because designing a preferred sexual identity shouldn't require a player to pick any particular skill or spend XP.

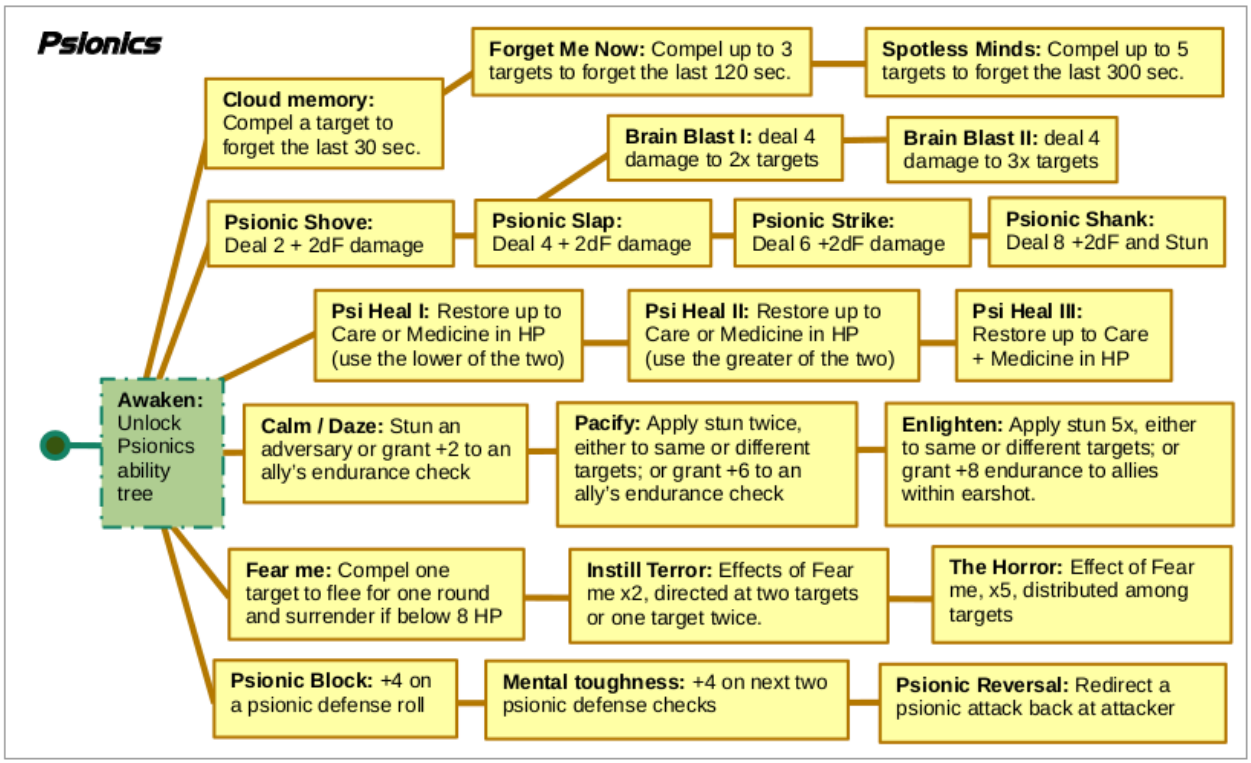
This choice is also out of deference to different players' comfort with sexual content in tabletop RPGs. Players and GMs are encouraged to outline their comfort levels with describing characters' sexual identities and functions. If everyone involved is comfortable, propose whatever sexual arrangements or reproductive capabilities each of you find interesting and fun to play.

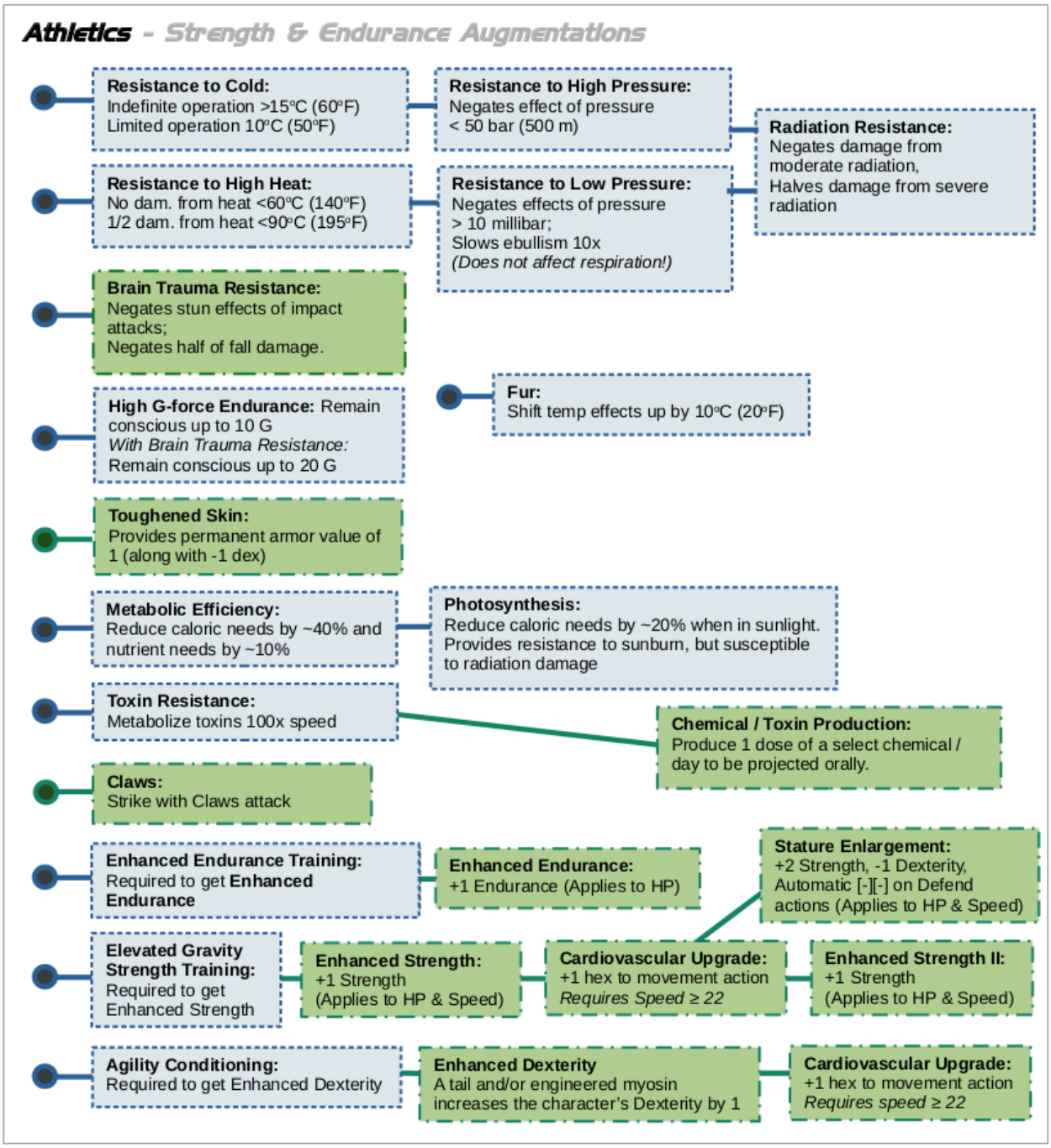
Creating Cyborgs, Synths, & Parahumans

When creating a character that is a cyborg, synth, or parahuman, consider Abilities outside the default recommended category if they make sense. For instance, it makes sense to give a cyborg character with 4 pts in Athletics two Cybernetics Augments instead of Athletics Abilities. Generally, do what makes sense for the character as long as the GM agrees.

Extended descriptions of these abilities and augmentations are provided after the ability trees.






Athletics - Strength & Endurance Augmentations
Resistance to Cold:
Indefinite operation >15°C (60°F)
Limited operation 10°C (50°F)
Resistance to High Pressure:
Negates effect of pressure
< 50 bar (500 m)
Radiation Resistance:
Negates damage from moderate radiation,
Halves damage from severe radiation
Resistance to High Heat:
No dam. from heat <60°C (140°F)
1/2 dam. from heat <90°C (195°F)
Resistance to Low Pressure:
Negates effects of pressure
> 10 millibar;
Slows ebullism 10x
(Does not affect respiration!)
Brain Trauma Resistance:
Negates stun effects of impact attacks;
Negates half of fall damage.
Fur:
Shift temp effects up by 10°C (20°F)
High G-force Endurance: Remain conscious up to 10 G
With Brain Trauma Resistance:
Remain conscious up to 20 G
Toughened Skin:
Provides permanent armor value of 1 (along with -1 dex)
Metabolic Efficiency:
Reduce caloric needs by ~40% and nutrient needs by ~10%
Photosynthesis:
Reduce caloric needs by ~20% when in sunlight. Provides resistance to sunburn, but susceptible to radiation damage
Toxin Resistance:
Metabolize toxins 100x speed
Chemical / Toxin Production:
Produce 1 dose of a select chemical / day to be projected orally.
Claws:
Strike with Claws attack
Enhanced Endurance Training:
Required to get Enhanced Endurance
Enhanced Endurance:
+1 Endurance (Applies to HP)
Stature Enlargement:
+2 Strength, -1 Dexterity, Automatic [-][-] on Defend actions (Applies to HP & Speed)
Elevated Gravity Strength Training:
Required to get Enhanced Strength
Enhanced Strength:
+1 Strength
(Applies to HP & Speed)
Cardiovascular Upgrade:
+1 hex to movement action
Requires Speed ≥ 22
Enhanced Strength II:
+1 Strength
(Applies to HP & Speed)
Agility Conditioning:
Required to get Enhanced Dexterity
Enhanced Dexterity
A tail and/or engineered myosin increases the character's Dexterity by 1
Cardiovascular Upgrade:
+1 hex to movement action
Requires speed ≥ 22

Athletics — Strength & Dexterity Abilities

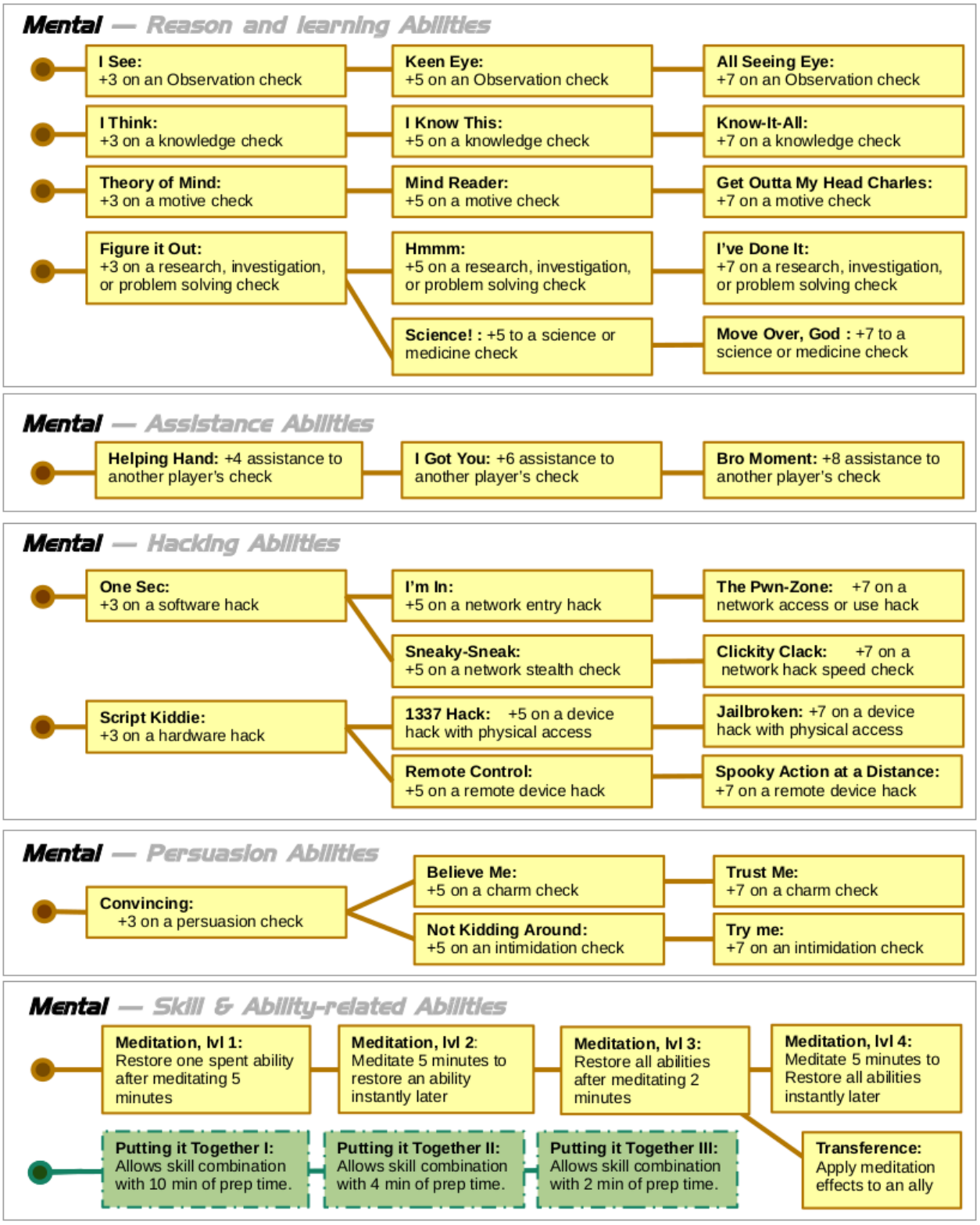
- **Physical Control:** +3 on a Strength or Dexterity check
- **Physical Discipline:** +5 on a Strength or Dexterity check
- **Physical Mastery:** +7 on a Strength or Dexterity check

Athletics - Respiration-Based Augmentations

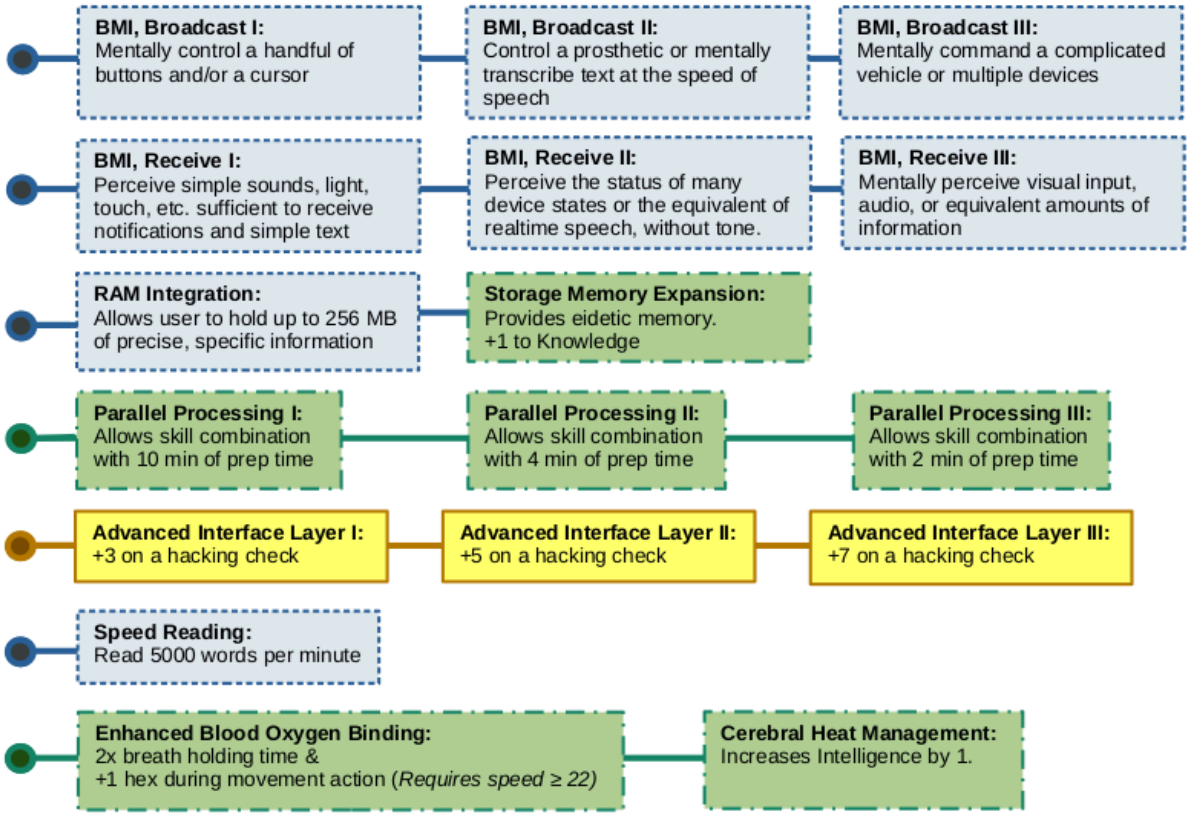
- **Autonomous Function Control Training:** 2x breath holding time & ability to regulate heart rate
- **Hemispheric Cortex Desyncronization:** Hold breath twice as long with -4 INT when active; Alert sleep
- **Enhanced Blood Oxygen Binding:** 2x breath holding time & +1 hex during movement action *Requires Speed ≥ 22*
  - **Gills:** *(w/ 8x efficiency)* Allows 4 hours of comfortable water breathing after which effort becomes tiring
    (w/ 16x efficiency) Allows indefinite water breathing, even while asleep
- **Cellular Oxygen Efficiency:** Hold breath twice as long

Athletics — Perception-Based Augmentations

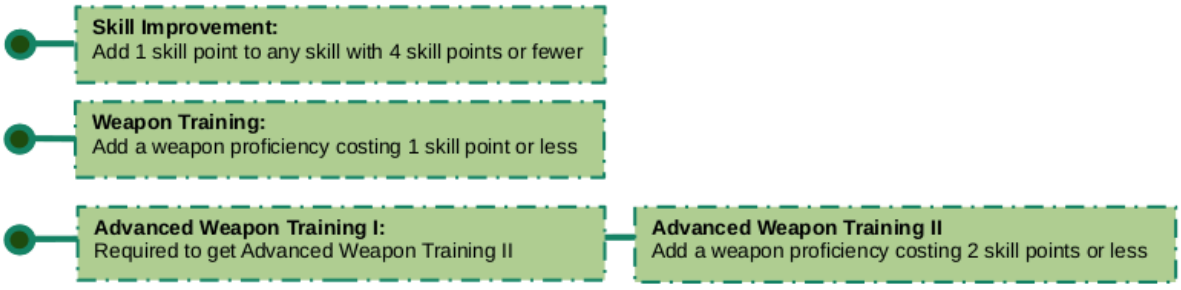
- **Low-Light Vision:** Negates low-light effects on checks
  - **Extended-Spectrum Vision:** Passively observe infrared and UV Removes disadvantage from smoke during combat
- **Underwater Vision:** See underwater without goggles
- **Telescopic Vision:** See far away objects clearly
- **Enhanced Sense of Smell**
- **Enhanced Hearing**
- **Nictitating Membranes**


Mental — Reason and learning Abilities
I See: +3 on an Observation check
Keen Eye: +5 on an Observation check
All Seeing Eye: +7 on an Observation check
I Think: +3 on a knowledge check
I Know This: +5 on a knowledge check
Know-It-All: +7 on a knowledge check
Theory of Mind: +3 on a motive check
Mind Reader: +5 on a motive check
Get Outta My Head Charles: +7 on a motive check
Figure it Out: +3 on a research, investigation, or problem solving check
Hmmm: +5 on a research, investigation, or problem solving check
I've Done It: +7 on a research, investigation, or problem solving check
Science! : +5 to a science or medicine check
Move Over, God : +7 to a science or medicine check
Mental — Assistance Abilities
Helping Hand: +4 assistance to another player's check
I Got You: +6 assistance to another player's check
Bro Moment: +8 assistance to another player's check
Mental — Hacking Abilities
One Sec: +3 on a software hack
I'm In: +5 on a network entry hack
The Pwn-Zone: +7 on a network access or use hack
Sneaky-Sneak: +5 on a network stealth check
Clickity Clack: +7 on a network hack speed check
Script Kiddie: +3 on a hardware hack
1337 Hack: +5 on a device hack with physical access
Jailbroken: +7 on a device hack with physical access
Remote Control: +5 on a remote device hack
Spooky Action at a Distance: +7 on a remote device hack
Mental — Persuasion Abilities
Convincing: +3 on a persuasion check
Believe Me: +5 on a charm check
Trust Me: +7 on a charm check
Not Kidding Around: +5 on an intimidation check
Try me: +7 on an intimidation check
Mental — Skill & Ability-related Abilities
Meditation, lvl 1: Restore one spent ability after meditating 5 minutes
Meditation, lvl 2: Meditate 5 minutes to restore an ability instantly later
Meditation, lvl 3: Restore all abilities after meditating 2 minutes
Meditation, lvl 4: Meditate 5 minutes to Restore all abilities instantly later
Putting it Together I: Allows skill combination with 10 min of prep time.
Putting it Together II: Allows skill combination with 4 min of prep time.
Putting it Together III: Allows skill combination with 2 min of prep time.
Transference: Apply meditation effects to an ally

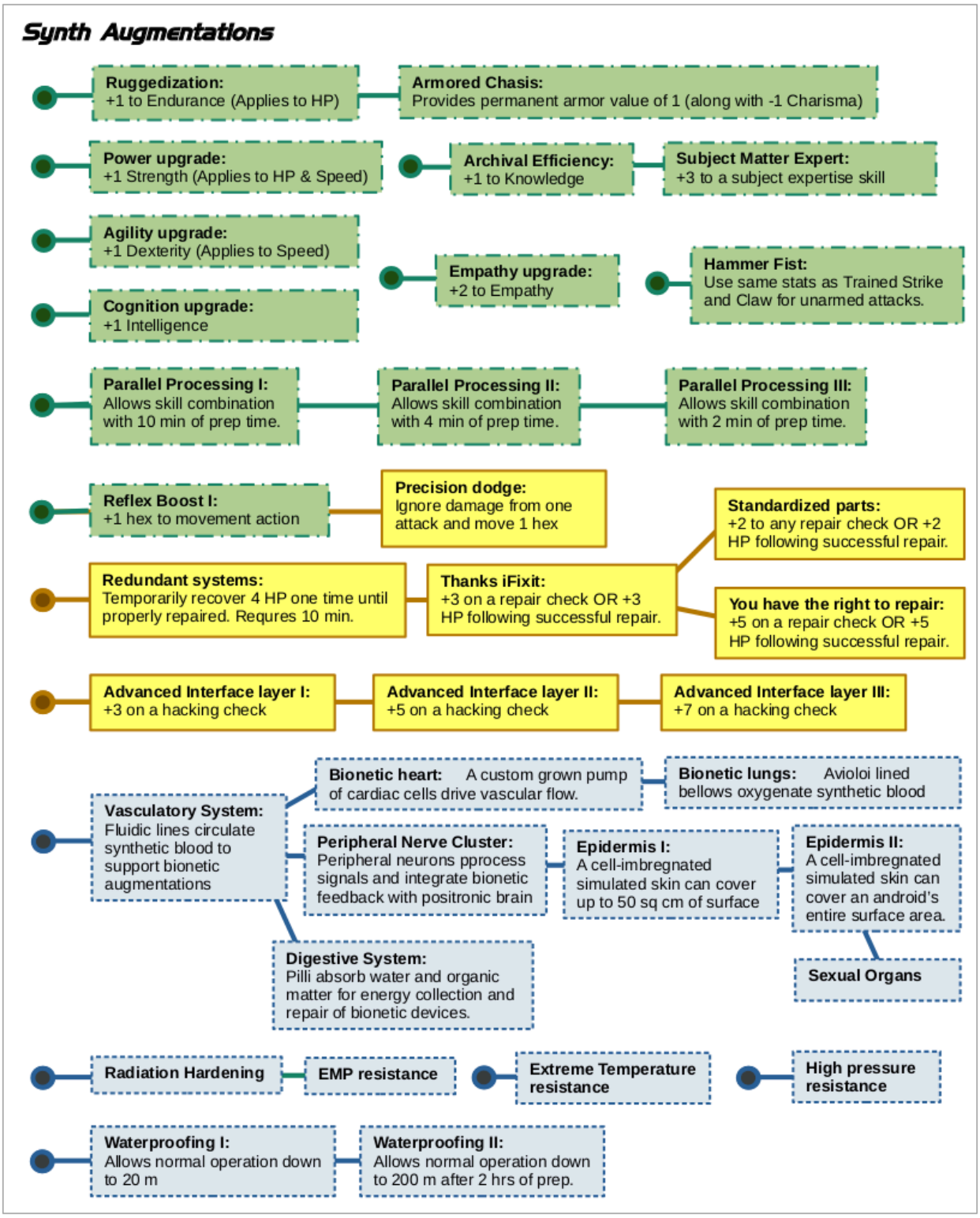
Cybernetic Augmentations



Skill upgrades



Synth Augmentations



Abilities & Augmentations Descriptions

Below is a set of descriptions of the augmentations described above provided for roleplay purposes. These are provided in order to explain the scientific and medical backgrounds of the various augmentations listed.

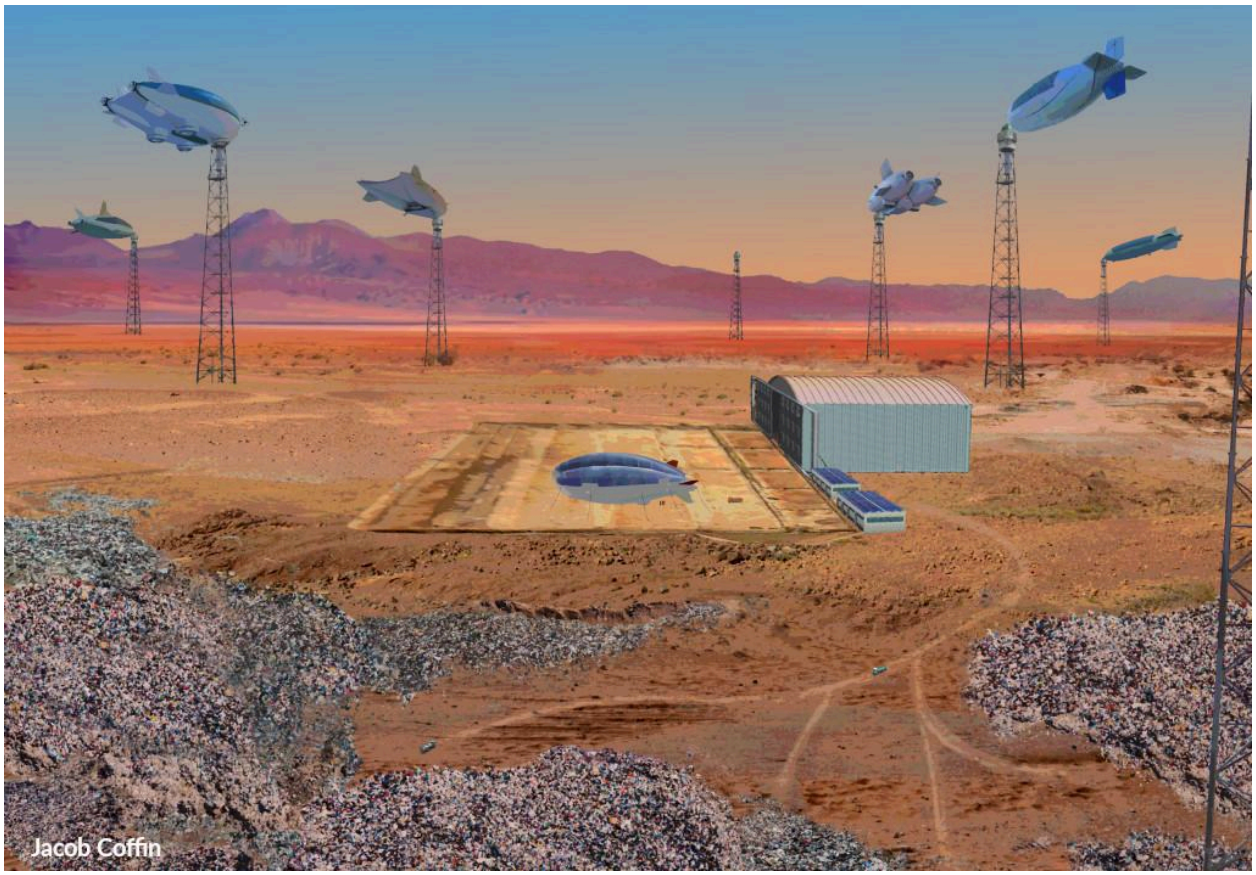
Combat

Most of these abilities are simply the result of training and don't require any elaboration or technological explanation. If the effect of any ability is unclear, players should confer with their GM or ask through one of the community portals like Discord or Lemmy.

The short and medium duration athletics boosts are assumed to be the result of some variety of adrenal gland or a trained ability to trigger an adrenaline burst or similar effect.

Psionics

Psionics certainly stretch the boundary of believability, and some tables may choose to not use them. Players using a Psionic Ability to influence their target should describe words, eye-contact, and/or gestures, and cannot use these abilities on unconscious or unaware targets purely through psychic intention.



Athletics - Strength & Endurance Augmentations

Resistance to cold: Genetic alterations to some of the most thermo-sensitive proteins along with cognitive conditioning and modifications to the autonomous nervous system enable prolonged comfortable operation of the body down to a core temperature of 15°C (60°F) and limited comfortable operation down to 10°C (50°F).

Resistance to heat: Similar to resistance to cold resistance treatments, a suite of genetic modifications to heat sensitive proteins as-well as micro-biomechanical implants to reinforce heat-sensitive cellular structures enable a body to withstand up to 60°C (140°F) for prolonged periods, and up to 90°C (195°F) for several minutes.

Resistance to high or low pressure: Genetic modifications similar to temperature resistance treatments that modify the most pressure-sensitive membranes to allow the continuation of critical metabolic functions in extreme pressure ranges.

Radiation resistance: Genetic modifications produce a suite of proteins that absorb ionizing radiation to shield DNA and other organelles and create greater durability within endothelial cells like blood vessels and other systems most susceptible to acute radiation damage. These changes operate in concert with an improved DNA strand repair system and modification of oncogenes to remove susceptibility to common deleterious mutations. The effect does not provide immunity to all radiation, but is similar to reducing radiation exposure through the conventional means (time, distance, and shielding) and substantially improves recovery from severe acute radiation exposures.

Concussion and traumatic brain injury resistance: Non-invasive micro-biomechanical reinforcing structure adds enhanced durability to duramater and cardiac tissue, and adds a non-Newtonian viscosity factor to cerebrospinal fluid to cushion the brain during impacts. This reduces susceptibility to concussions and traumatic brain injury, and allows the body to briefly endure up to 30 G of acceleration without damage. The actual maximum acceleration at which a character with this trait can remain conscious depends on the sum effect of other augments that supply oxygen.

Within the game mechanics, this allows player characters to ignore stun effects from impact attacks (such as from a club or fists). Alternatively, if it's easier for players and GMs, this can be used to allow players to disregard the first stun effect in combat once per day.

High-acceleration tolerance: non-invasive micro-biomechanical surgery is used to enable vasoconstriction of the veins and arteries of the body direct extra blood flow to the brain to retain consciousness during high acceleration, allowing an individual to remain conscious during a sustained exposure to 10 G.

Fur: Fur is specialized body hair. It can provide resistance to cold or insect bites. It's mostly cosmetic, but why would we deny furry players their fantasy? Depending on realism, it may or may not increase the likelihood of hyperthermia.

Toughened Skin: Modifications to keratinocytes in the skin produce hard, thick skin with the appearance and toughness of crocodile or rhinoceros hide. This provides 1 point of permanent armor, though it comes with the standard -1 disadvantage to charisma checks (unless waived by the GM).

Reduced Metabolic Demand: Genetic modification of mitochondria and a modified gastrointestinal microbiome reduce caloric needs by ~40%. Nutrient and protein needs are ~10% less.

Photosynthesis: Chloroplasts in the dermis convert water and CO_2 into glucose, giving the skin a dark green appearance and reducing external caloric needs by ~20% while under full sunlight.

Toxin resistance: engineered cells grafted into the liver enable rapid metabolism of a wide range of toxins at roughly 100 times the normal rate.

Toxin or other chemical production requires the surgical grafting and innervation of custom glands that fill with a desired organic product. This can be a paralytic agent, a caustic agent, a sedative or most other simple organic compounds. Typically, this modification requires resistance to the produced compound. Once engrafted, the contents of the glands can be ejected under control to either flood a bite or shoot as a projectile fluid.

Fangs consist of dental modification to the teeth and jaw to provide long, sharpened canine teeth and associated bite force. This modification can be customized in its appearance and function from modest to extreme.

Claws are provided by surgically replacing the tips of fingers and toes with custom grown replacements that grow sharp, narrow fingernails in the style, color, and growth speed of an individual's choosing. The character can use the claws to attack.

Endurance Enhancement is a composite treatment similar to Strength Enhancement and resistance to temperature, pressure, radiation, and acceleration. Unlike those treatments, it is a broader collection of more modest genetic upgrades to many of the same systems. Keratinocytes are upgraded to produce slightly more durable, fast-healing skin. Upgrades to extracellular matrix proteins, tendons, and the endothelial system provides greater resistance to and healing from percussive force. Modest upgrades to the cardiovascular system and dura mater produce a composite effect that allows a recipient to push their body harder and recover faster from most general forms of physical trauma.

Strength Enhancement is a common range of augmentations that enables skeletal muscles to provide substantially more contraction force overall as well as per mass. Strength enhancement is a multifactorial process that begins with dedicated exercise and dietary programs coupled with genetic treatments to modify relevant proteins. It is a combination of a range of practices but a common approach is: recipients start by maximizing the strength through routine measures, including training in elevated gravity conditions common in gymnasium centrifuge rings.

Once a participant has plateaued in their strength they receive a suite of genetic modifications which allow for higher contractile efficiency of muscle fibers, faster gain of muscle mass, greater retention of muscle mass, and accelerated healing and recovery of small bruising and tearing typical of exertion, and increases to the durability of tendons and bones to support the increased load. This genetic reprogramming does not confer higher strength on its own, but instead substantially lifts the recipient's potential for further gains in muscle mass and strength. Once the recipient resumes strength training under elevated gravity they can attain levels of strength previously unattainable by an heirloom human genotype.

Cardiovascular enhancement is the process of building additional cardiac muscle, enlarging chambers of the heart, and reinforcing blood vessels to enable elevated athletic strain and support

the higher cardiovascular demands of certain augmentations such as stature enlargement and enhanced strength.

Tail addition is the process of surgically attaching a custom-grown tail from an individual's cells, which can provide improved balance, turning agility, and stability when climbing, as well as cosmetic benefits. Tails come in many styles, but the most popular are feline and simian inspired tails.

Stature Enlargement: A combination of skeletal limb lengthening and biomechanical bone and tendon reinforcement can be employed to safely induce gigantism up to roughly 240 cm (~8 ft) of height and 270 kg (~600 lbs). Most individuals opt for less than this, however, as it does increase the likelihood of mobility issues and other complications, particularly in advanced age.

Short-duration athletics increase: chemical glands produce a cocktail of hormones to enhance strength, aggression, and reflex when triggered through focus under elevated stress.

Athletics - Strength & Dexterity Abilities

These abilities are assumed to rely on training which allows the players to perform extraordinary feats of power or agility. Each can be used once per day following sufficient rest. Players may want to use a drug or technological tool to justify these limited applications of heightened performance. Players and GMs are encouraged to use whatever pharmacological and/or technological explanation is sensible to them.

Athletics - Respiration-based Augmentations

These augmentations form the primary set of modifications needed to allow for people to spend long-durations underwater.

Autonomous function control training is a cognitive practice that allows a practitioner to consciously regulate their heart rate, perspiration, and metabolism. The effect is multiplicative with other respiration-based augmentations. Receiving this augmentation and learning to use it effectively is typically a requirement before other mod clinics will consider assisting a person in obtaining respiration-based modifications that can carry higher risks of unsafe behavior.

Hemispheric Cortex Desynchronization is a process of developing an ability to exercise the hemispheres of the brain independently through meditation and cognition exercises under a drug treatment. This allows a practitioner to maintain alertness in one hemisphere while resting the other (as dolphins do). This can be used to substantially reduce oxygen consumption and to rest without losing consciousness. During this state, cognitive performance is slower and simpler, like a coffee drinker before their coffee. This state is activated and deactivated deliberately.

Under extreme and deliberate practicing of Hemispheric Cortex Desynchronization, each hemisphere of the brain can develop an independent identity and consciousness. This requires a very persistent, committed, long-term practice of desyncing, and cannot happen by accident. In such cases, both hemispheres understand themselves to be an incomplete component of a whole.

Enhanced blood oxygen binding: Modified hemoglobin improves absorption efficiency to bind oxygen in the lungs even at low concentrations while releasing it where most needed in the body. In order to obtain this augmentation, most clinics will require applicants to have already demonstrated a history of good judgment and of responsibly managing other respiration modification practices. In addition to further doubling a recipient's breath holding time, this augmentation also allows recipients to increase their travel distance when using a Move action during combat by one hex space if their Speed is 22 or greater.

Enhanced cellular oxygen efficiency: Enhanced oxygen efficiency is achieved through genetic modification that allows cells to enter a high-efficiency state in which they limit operations to a bare minimum. This doubles breath holding duration. During this state, their production of new proteins is curtailed, so proper healing and long-term maintenance of the body requires sufficient rest and time out of water. But during underwater excursions, this state is highly useful for extending the time a person can operate.

Gills: In order to breathe underwater, openings are made to allow water to flow through the alveoli of the lungs without needing to reverse flow to exhale. Slits at the lower edge of each lung are near universal, however upper slits are optional. Some simply entrain water through their mouths, while most have a slit between the pectoral muscles and the clavicle. These slits naturally close themselves tightly on land and open in the water. To work, gills require recipients to have already increased their body's ability to operate with significantly less oxygen through most other respiration enhancement means. Recipients must have already doubled their breath holding capacity three times for gills to be useful. At this level, a recipient can use gills for comfortable breathing underwater for several hours before they'll need to return to land. If recipients employ all commonplace respiration enhancement it becomes possible to live underwater functionally indefinitely.

Athletics - Perception-based Augmentations

Low-light vision: Genetic modification of retinal cells increases the density and sensitivity of rods and cones, allowing for excellent vision in low light. For all vision augments, players can choose to modify the shape of their pupils and irises when obtaining this augment at no additional cost.

Extended spectrum vision: Genetic modification similar to low-light vision, with the addition of protein changes to allow for detection of infrared and ultraviolet light. This is a passive quality, not something a player needs to declare or activate. The individual can see slight changes in body heat, and a glow of luminance from warm objects in pitch black. With an infrared light source, they can see what normal eyes see at night during a full moon when others would perceive pitch blackness. Ultraviolet vision allows the individual to see pigments that are unnoticeable to unmodified eyes, such as patterns in flowers and faded body fluid stains. This mod negates visual effects of smoke. Cosmetic eye changes are common optional add-ons to this mod.

Underwater vision: Human eyes don't see clearly underwater because water refracts light more than air, moving the focal point farther than our eyes can focus. Premium underwater vision treatment modifies the lens and optic muscles to allow the eyes to focus underwater. Alternatively, a player may wish to have basic underwater vision, which grants the ability to see underwater, but lacks the ability to focus in air, and thus requires goggles full of water to see clearly out of water. Both negate the effects of salt water.

Telescopic vision uses similar technologies as underwater vision to allow an individual to observe far away elements clearly or perceive small elements from across a room as though they are close. As with other vision mods, cosmetic changes are offered optionally.

Enhanced smell: A genetic modification that increases the density and sensitivity of olfactory receptors to allow a character to detect chemicals, identify people, and track them.

Enhanced hearing: A combination of genetic modification and minor surgery that increases the size of the ear canal and replaces several components of the year with synthetic materials that increase the sensitivity of the ear canal and brain. The ears may also be enlarged and their control strengthened to allow directional hearing. People with enhanced hearing may have no external visible signs, but this modification is typically coupled with pointed ears.

Nictitating Membranes: A nictitating membrane is a transparent third eyelid that can cover an eye while still allowing it to see. Nictitating membrane mods allow the recipient benefits afforded by sunglasses and other eye protection. These membranes are often impregnated with adjustable pigments that allow their opacity to be consciously modulated. Their most common function is as simple UV-protective sunglasses, however they can also provide some protection from debris, saltwater, chemical irritants, low pressures, or a specified wavelength tailored for routine potential exposure to laser emissions.

Mental Abilities

- Reason & Learning Abilities
- Assistance Abilities
- Hacking Abilities
- Persuasion Abilities
- Skill & Ability-related Abilities

These mental abilities may be based on conventional acumen alone or the augmentation of drugs. It can be assumed that the characters are able through their experience and training to exert themselves once a day (or more frequently if they acquire multiple acquisitions of an ability) when rested to perform at an exceptional level, or that they can achieve these effects using pharmacological assistance. In gameplay, we've sometimes had players describe taking "future adderall", in recognition that this kind of drug-assisted performance boost already exists.

In many games, the use of performance enhancing drugs is moralized through a presumed negative consequence or social stigma. Players are encouraged not to feel obligated to maintain this. They can certainly include harmful effects where narratively appropriate, but are under no obligations to reinforce antiquated assumptions that unnatural chemical effects are implicitly different from any natural, behavioral, or dietary choice for adjusting the body's functioning.

Cybernetic Augmentations

Cybernetics include a broad range of electro, optical, and mechanical devices, but the term is most commonly applied to machine parts that extend mental function rather than those that restore a common human ability. For more information on the cultural attitudes towards cybernetic enhancement see the subsection of Major Lifestyle Augmentations on Cyborgs.

Brain-Machine Interface, Broadcast: A cortical implant reads brain activity to act as an interface device that allows the user to issue mental commands. The specificity of commands varies by level. Level I acts like a macro-keyboard. Connected devices are keyed to a handful of set trigger thoughts that can run-preset commands. With training, these can be chained together to silently, mentally command a series of events like deploying a drone and instructing it to follow a target. Level II allows a user to send enough inputs to play a piano with a robotic hand. Level III allows the user to control multiple complex systems, such as a vehicle, avatar, or exosuit.

Brain-Machine Interface, Receive: An implant in one of the sensory cortices allows digital simulation of additional input. This can be used to provide a mental impression of seeing a light turn on or off; seeing a short line of text; hearing unique notification chimes; or feeling a pinprick if the input is meant to create an additional reflex sense. The volume and quality of the input increases with levels. The first level provides a level of input similar to an old-fashioned pager. The third level is like an additional computer monitor in your head.

Random-Access Memory integration: An implanted chip enables the beneficiary to recall the order of a deck of playing cards with ease, or hold a 25 digit number in mind. To operate effectively, however, players must practice good sleep hygiene.

Storage Memory Expansion: Provides an eidetic memory, increasing Knowledge by 1. Like RAM integration, this requires the user to be well rested to fully function.

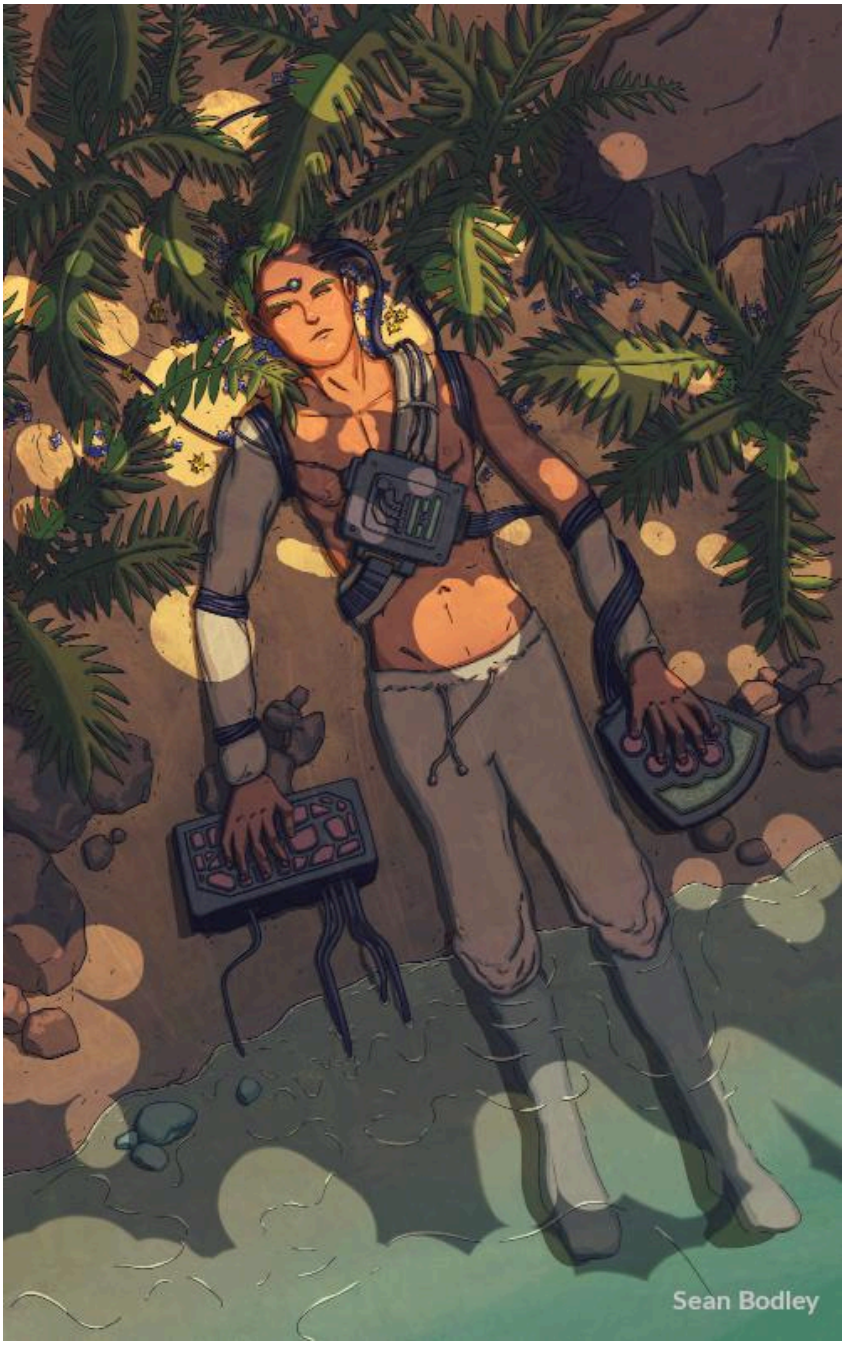
Parallel Processing: Organic microcircuitry strengthens interconnecting regions of the prefrontal cortex, allowing for the integration of higher-level thinking between multiple applications of functional ability. Each level reduces the amount of time a character requires to perform skill combinations. Combining skills allows a player to add half of a second skill (rounding up) to their relevant Attribute and Skill when calculating their Ability Score.

Advanced Interface Layer: organic soft-circuitry based microchips can be designed to perform complex calculations and operations. When implanted in the brain these provide enhanced synthetic abilities within the organic cognition loop. The most popular implementation allows hackers to incorporate a variety of common routines and penetration tests into rapidly recallable action packages once per day.

This exhaustible skill is redundant with the mental hacking abilities, but more flexible in its use. Designwise, this is meant to reflect that similar abilities can be achieved through training and conventional learning if a character is averse to cybernetics, but cybernetic modification still provides a meaningful benefit. This concept – of using embedded dedicated organic microprocessors to augment a specific kind of problem solving or improve intellect within a narrow application – is included in part as a demonstration of how cybernetics can be used to justify other exhaustible Abilities that players may ask for.

Speed Reading: The Speed Reading augment is another implementation of the same form of embedded dedicated microprocessing as the Advanced Interface Layer. An organic microprocessor embedded into the visual cortex recognizes printed characters and character combinations in a 10th the time that the visual cortex normally does, allowing for the brain's to perform the reading process at an otherwise inhuman speed.

This is an example of how this kind of cybernetics can be used in a non-mechanistic ability. This augmentation does not have a rule-based mechanism of affecting success, but if a player wishes to read a book within a few minutes, this allows for them to do so narratively. A player might also ask to receive a bonus during a relevant role, such as if they're performing extensive reading during a research interstitial. Players and GMs are encouraged to apply bonuses in ways that make sense to reflect the benefits conferred by non-mechanistic abilities at the GM's discretion.

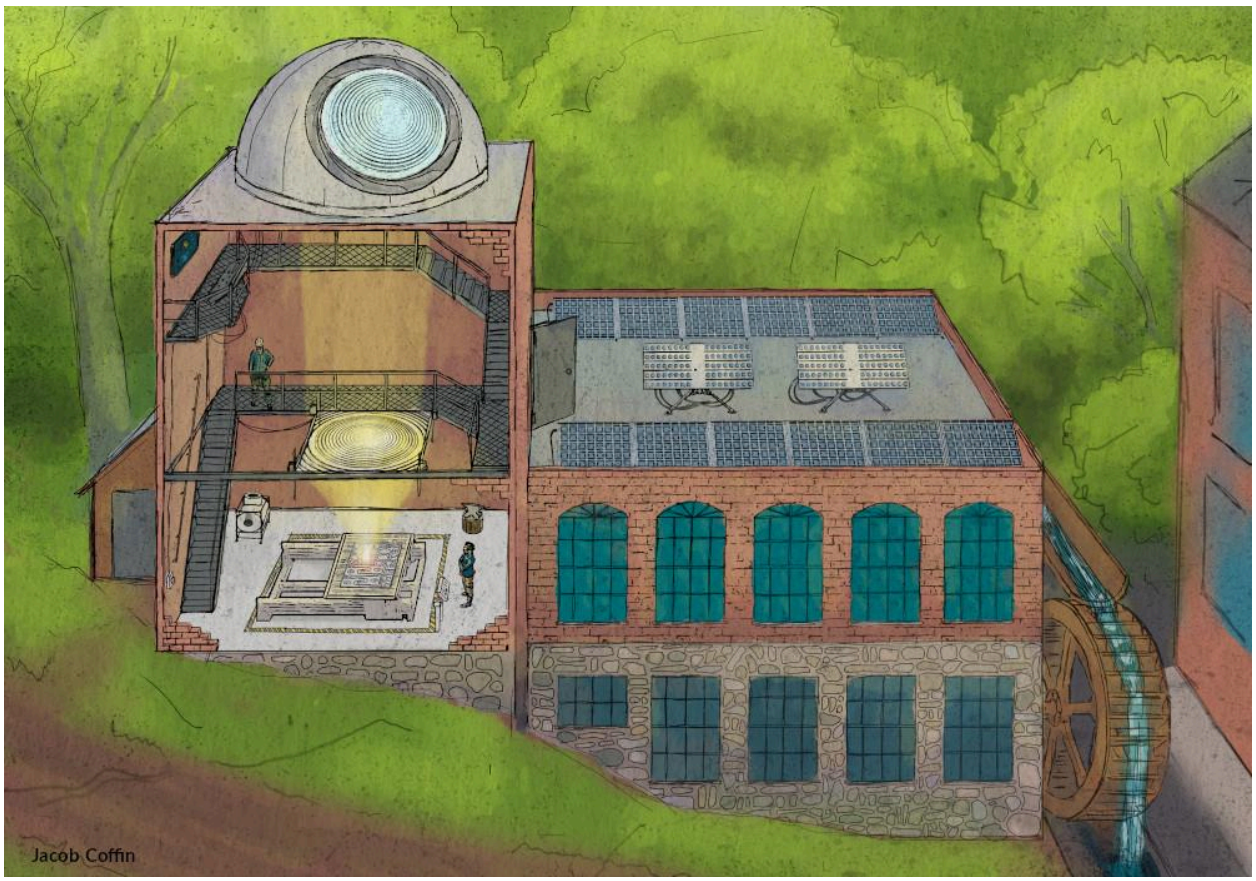


Enhanced Blood Oxygen Binding: This genetic augmentation to the efficiency of hemoglobin in the blood is a required precursor to the Cerebral Heat Management augment. It also doubles breath-holding ability and allows a character to increase the distance of their Movement action during combat by 1 if their speed is 22 or greater.

This augmentation is identical to the same augment listed in both the respiration-based augments. Acquiring this augmentation in either section satisfies the requirements for higher-level augmentations in either section. They cannot be treated as unique augmentations to recursively gain the benefits of this augmentation twice.

Cerebral Heat Management: Heat-conductive microfilaments are embedded into the cerebral cortex to direct heat more efficiently out of the brain and out to the skin. When combined with Enhanced Blood Oxygen Binding, this augmentation allows the brain to perform all its usual operations faster and more efficiently. It does not change a character's personality or way of thinking. It just allows for their existing intellect to function more readily. Safe application of this augment requires that the user be able to appropriately shed their excess heat. This is easily performed under normal conditions through sweating, or radiating heat if their head isn't insulated, but if a player were to think intently on a very hot day or while wearing a heavy hat, they may experience typical fever symptoms. Many recipients of this augment keep their hair short. There are a variety of styles including fully shaved bald or partially shaved styles (such as mohawks) that are popular among users of Cerebral Heat Management augmentations.

Personal electronics as implants: Characters may integrate implanted devices in their eyes or brain to interface with technology, but no engineer, doctor, or recipient is going to employ devices which have obvious vulnerabilities to remote hacking. If a player wants these kinds of augmentations, make sure they have common-sense failsafes like a physical shutoff switch or removable component that is externally accessible without tools.



Skill Upgrades

Skill upgrades are meant to allow players to spend their experience points increasing their Skill points to represent improvement at skilled tasks or acquire new Combat Proficiencies.

The skill point upgrades are intended to apply only to skills in which a character has 4 points or fewer. This limitation is intended mechanistically to avoid guaranteed success in some narrow area and narratively to encourage players to broaden their skill sets. As with any rule, a table can choose to be flexible.

Combat Proficiencies

Two add new Combat Proficiencies, add a point to a character's Combat skill and then re-select Combat Proficiencies. The GM will have to sign off.

An alternative approach to Skills and growth

One recommended alternative rule set is to have players start during character creation with three skills of 6 points instead of one skill of 8, one of 7, and one of 6. Then during play, allow skill upgrades of any skill up to 8 points. This creates a very fulfilling way to start new players as more realistically average in their skills and to organically evolve into legendary heroes over the course of play.

Synth Augmentations

Synth augmentations are easier to do compared to augmentations to organic creatures. Organic augmentations are an application of intelligent engineering to a system not originally designed by that intelligence. Conversely, embodied synths were designed intelligently by the same thinking used to design upgrades. Because of this natural upgradability, increases to base Attributes (Strength, Dexterity, etc.) can be achieved with one augmentation instead of two for organics.

The process is similar: a creature designed for basic functioning may wish to increase that functioning or personalize its physical form. Below are a collection of recommended possibilities and the explanation for their operation. As with all the Abilities & Augmentations, these are meant as a starting point from which players can invent their own.. Players and GMs should consider the presented option as an illustration that are mechanistically reasonable within the gameplay, on-theme, and narratively explainable.

Ruggedization: High-durability structural components and shock-absorbing materials increase Endurance by 1. This is a prerequisite for upgrading to an armored chassis, which provides 1 point of armor (with accompanying -1 disadvantage to Charisma).

Power Upgrade: High quality power delivery systems and heat management supply high-torque motors with the ability to deliver substantial force. Increases Strength by 1.

Archival Efficiency: Configuration settings to the positronic brain allow the synth to improve retention, organization, and utilization of complex information. Increases Knowledge by 1.

Subject Matter Expert: Configuration and training enable the synth to increase their ability to apply an understanding of select topics. Provides a 3 point increase to one subject-matter skill.

Agility Upgrade: Upgrades to accelerometers, proprioception, environmental analysis and their integration increases the synth's Dexterity by 1. This change applies to the calculation of Speed (meaning Speed goes up by 2).

Cognition Upgrade: Improved heat management allows the synth to run its natural deductive and inductive processes more quickly and efficiently, increasing its general-purpose Intelligence by 1.

Empathy Upgrade: Training to improve understanding and natural processing of one's ability conceptualize the experience of others as one's own allows the synth to increase their Empathy skill by 2 points.

Hammer Fist: A mechanism flips plates that surround the wrist and forearm over an android's fist, and inflates a collar with coolant inside the panel to protect the delicate hand mechanisms and provide mass. This provides a synth with the benefits of the "Trained Strike" attack.

Parallel Processing: This added microcircuit arrangement allows a synth to paralellize tasks in order to apply the benefits of a second skill more quickly. As with the cybernetic version, this lets the user add half of a second skill (rounded up) to their total Ability Score.

Reflex Boost: Local mapping systems and kinematic modeling allow the synth to move an additional space of movement when using the Move action during combat.

Precision Dodge: Local mapping systems and kinematic modeling allow the synth to overload motors in order to dodge an attack in combat once between full rest and repair periods.

Repair Abilities: Redundant Systems, Thanks iFixit, Standardized Parts, and Right to Repair allow the synth to repair themselves or other machines. If repairing themselves, this can be explained as running in a temporary backup configuration that allows them to behave as if undamaged with the assumption that they'll need to fully repair the system later. Or it can be explained as a genuine repair, in which a damaged component is fixed or replaced.

Advanced Interface Layer: These specialized microprocessing systems operate in machines brains just as they do in organic brains under the Cybernetic Augmentation description. They allow for the user to periodically apply a temporary performance boost to a task-specific check between daily backup and repair cycles. The most common application is to engineering workarounds (i.e. hacking), but players can suggest similar alternative uses.

EMP resistance: Shielding and circuitry upgrades enables a machine to sustain high levels of electromagnetic shock with reduced disruption or permanent damage.

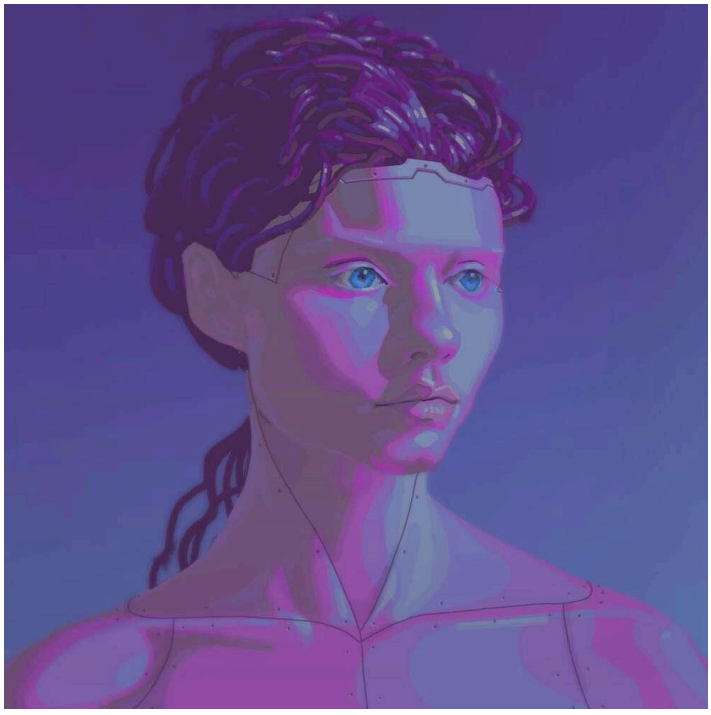
Thermal endurance upgrade: Upgrades to temperature-sensitive systems enable operation in more extreme conditions.

Radiation endurance upgrade: Upgrades and shielding to sensitive components to allow safe operation in space or other high-radiation environments.

Waterproofing: sealed compartments, oil immersion, and fiber-optic replacements for data circuits allow safe operation in water up to 10 m of depth. Greater waterproofing allows operation up to unconstrained depths.

Bionetic Augmentations have been included as a corollary to cybernetic augmentations in organic creatures. Generally, they're not typically superior to electromechanical systems, but they do appeal to some synths. This interest may be purely philosophical, or it may be somewhat practical. Skin and nervous systems allow synths to experience pressure, temperature, and touch more similarly to organic creatures than electromechanical sensors reading the same environmental conditions allow. For synths invested in being able to relate to fundamental human physical sensations, or learning to cook well, these mods are more than just a philosophical exercise.

Vasculatory System: A fundamental requirement to maintain any cell-based bionetic mod is a basic system for cycling synthetic blood through a diffusional membrane to provide dissolved oxygen, water, glucose, proteins, fats, and signaling molecules.



Peripheral nervous system: A peripheral nervous system allows synths to more natively replicate human sensory stimulation processing. Cultures of nerve cell networks receive input from sensors and relay a downstream output to the positronic brain.

Epidermis I: Skin cells (often on hands or a face) receive a variety of sensations that are relayed to the peripheral nervous system.

Epidermis II: Advanced epidermal coverings allow living skin to cover the entirety of an android's exterior surface.

Sexual Organs: This is assumed to be self-explanatory. It should go without saying that players and GMs should employ sexual themes within the boundaries set by the rest of the table.

Heart: A cell-based heart replaces the mechanical pump used to circulate synthetic blood.

Lungs: Cell-based lungs replace synthetic membranes to dissolve oxygen into the circulating synthetic blood.

Digestive system: a combination mechanical-microbial digestion chamber extracts water, macronutrients, and micronutrients from bulk organic matter to sustain cells. This can replace the need to load a nutrient tank with cell-maintenance broth.

And so on: Readers are welcome to use the same principles to imagine eyes, bones, bone marrow, muscles, and whatever other systems they'd like to create all manner of bionetic cyborg synths.

Inventory & Carry

The items a character has on them are listed on page 3 of the character sheet: the Actions & Items sheet. Rather than employing a system of encumbrance, characters may carry on their persons anything that they are able to describe carrying to the GM's satisfaction. These items should all be represented on the Actions & Items sheet. If at any point a player can't fit everything they would like to carry onto this sheet, that's likely an indication that they're trying to carry too much. Cards may be sized to reflect the bulk of an item if desired but they are not required to faithfully represent each item's size. The purpose of the Items & Actions sheet is simply to make players more aware of the tools at their disposal and to discourage hoarding.

The items a character has on them are not expected to reflect a complete catalog of all the items a character owns or can access. Players are free to keep an inventory of all the items that they have at their disposal, but they should limit to the items of a truly rare nature. Players can obtain special items – a crowbar, a shovel, a geiger counter, a magnetometer – relatively easily from friends or tool libraries, most of which will deliver items by courier or drone. As this is a post-scarcity setting, a player's ability to acquire something is dependent only on their ability to justify being able to acquire it, and GMs are encouraged to help recommend sources to players.

The GM should reward players who return or donate collected items to the tool libraries or recycling centers. This could be as simple as informing characters that they received a thank-you message, having a recurring 'fixer' contact offer to assist with sourcing needs in the future, or having a librarian finally invite the group to one of their legendary parties.

Means of Carrying Things

It bears repeating that players are advised not to view the items available to them as magic, weightless, voluminous things. A lot of items have been heavily miniaturized and may fit in a pocket, but the player is still expected to understand that it needs to be in a pocket in their pants, not some kind of unexplained pocket dimension. When trying to satisfy a common player urge to have any and everything available to them, suggest that they use as many of the following as is necessary to fulfill their Batman fantasy.

- Regular pockets
- Cargo pockets
- Hidden pockets
- A fannypack
- A hip satchel
- A shoulder satchel
- A messenger bag
- A briefcase
- A micro backpack
- A standard backpack
- A large cargo backpack
- A bindle sack
- Under a hat
- Tucked in a headband
- In a sports bra
- In a waistband
- In their sock
- A cargo belt
- A specialized hoster
- A walking stick compartment
- A subdermal pocket
- You get the idea

Tools and Equipment

Characters will often be asked at the start of an adventure or day what they're wearing and what they're carrying. Below are common items they might possess. If a player wishes to have any of these on them, the GM should ask them to place a card for each item on their Actions & Items page and describe how they're carrying the items in their carry.

The tools and equipment available are extremely open ended. GMs are encouraged to introduce whatever tools they think fit the world to players, and players are encouraged to propose any tool that they think makes sense to the GM. How these tools behave and what skill checks they require (if any) is left to the GM's discretion. The list below is meant to inspire players by describing some of the tools available and what certain common tools might look like.

Common Items

A **Cyberdeck** is a flexible, customized personal computer. They often consist of a unit the size of a small deck of playing cards containing a battery and computer networked wirelessly to contact lenses or glasses and other wearable peripherals. More information is available on the next page under Personal Electronics.

An **Aquaflask** is a bottle used to stay hydrated. Drinking from it can restore 1 HP per day.

Medical putty (sometimes called medputty or medclay) is a miraculous multi-factor healing composite often used for emergency medicine. When applied to grievous wounds it can arrest bleeding, reduce inflammation, mask pain, and assist tissue in regenerating. Details can be found in Healing.

Restraints are used to temporarily restrain a person's ability to attack or flee. The most common form of restraint is a metamaterial tube 30 cm long and 1 cm across. It has the flexibility of silicone or putty, but when wrapped around wrists or objects and then activated, it binds to itself, doubles in volume, and changes its hardness to that of medium-hard rubber. These restraints can be removed with the correct electronic signal or with a sharp knife.

Like any tool for subduing a person, carrying restraints can be viewed as a threatening act. But like non-lethal weapons, their possession and use by protectors is viewed through the lens of how much trust any given character has for the protectors in their community. Players are advised to have restraints if they are carrying a weapon, so that they can end fights while applying the least amount of violence.

Personal electronics

Characters have wide access to personal electronic communication systems like cell phones and laptops. In-world these may be referred to as cyberdecks, terminals, or personal computers. Because Fully Automated leans towards realism, these devices are small, light-weight, durable, and unobtrusive, but they are still physical objects. It is reasonable to assume that a character can dive into water without concern for their electronics, however it is not reasonable for a player who is completely naked to assume that they can establish a real-time two-way audio call with a thought (without at least some explanation). The basic constraints of physics on optical sensors, antennae, and interfaces still require these devices to occupy physical space to work.

Players and GMs should discuss what kind of use cases the players have in mind and what form factors allow this. Below are a few common personal devices.

Heads-up-display glasses and contact lenses - These devices provide useful information into the user's visual field. They are not able to obscure the world or replace the full range of brightness or darkness of the world as XR goggles do, but they provide hands-free textual input and simple graphics without the need to divert attention to a screen.

Independent eXtended-Reality (XR) goggles - XR goggles provide an immersive overlay or substitution to the information entering the user's eyes. Independent systems are worn as glasses or visors.

Base-dependent XR goggles - Base-dependent XR goggles operate similarly to independent XR goggles, but use lasers and outside-in tracking to improve the quality of the experience at the expense of portability.

Bone-conduction speakers - Bone conduction speakers are audio speakers that transmit vibration through contact with the skull instead of by sending vibrations through air into the ear drum. They offer lower fidelity, but allow users to hear audio without obstructing their ability to use their ears to hear the world around them.

Olfactory Reporter - An olfactory reporter (or "sniffer") stimulates olfactory receptors in the nose to simulate smells in the same way headphones simulate sound. The reporter is typically contained in the bridge or nose-pads of a pair of glasses, and broadcasts a shortwave radio signal that triggers conformational changes in olfactory receiver molecules. These olfactory receivers are chemicals with a neutral smell that adhere to olfactory nerves in the nasal cavity for several hours at a time. Most people who use olfactory reporters integrate olfactory receivers into their toothpaste or a food they consume as part of their daily routine. Olfactory receivers detach over the course of a day or can be removed immediately with smelling salts.

For dogs and other parahuman animals that use smell as a primary sense, sniffers are to them what heads-up display contact lenses are to many humans.

Subvocalizer - A subvocalizer is a piezoelectric sensor that gently contacts the soft tissue of the neck and interprets muscle movement to reconstruct speech which is spoken without expelling air. These may be integrated into jewelry, clothes, or a comfortable, personalized comm collar. By picking up speech that is spoken without expelling air or moving one's lips, a subvocalizer allows the user to silently issue voice commands to their electronics or hold a conversation without visibly speaking.

Touchport - A touchport is a thin mechanical pad adhered to the skin that transmits gentle touch or electrical pulse to the nerves of the skin. Through training and chemical assistance, a users' brain can be trained to interpret signals in the touchport as other signals. This is the most common way of innervating prosthetics to restore a users' sense of touch, but it can also be use to provide things like a quick-reflex sense that warns of fast-coming danger based on cameras that watch a users' blind spot, or magnetoperception that allows a user to sense compass directions and the presence of magnetic fields.

Nerveport - A nerveport is similar to a touchport, but integrated into the body. It may be subdermally implanted within skin or implanted directly within the cortex of the brain.

Floatie - A floatie is a subsonic acoustic resonator that manipulates the fluid within the cochlear labyrinth to simulate the effects of acceleration. Put simply, it spoofs input to the labyrinth of the ear in the same way that screens spoof visual input to the eyes and speakers spoof auditory input to the ears.

Barker - A barker is a communication aid for dogs or other non-verbal animals. A barker provides context-sensitive buttons that a non-verbal animal can press to formulate messages that the barker will recite aloud. These can be stationary or mobile. In the case of mobile barkers, they are light-weight devices mounted on a telescoping pole that extends from a collar and projects buttons on the ground in front of an animal. The barker visually observes which buttons are pressed to provide the same functionality of a physical non-mobile barker.

Portable Input devices - Users can type or issue gesture commands to electronics using finger tracking gloves or hand and finger tracking cameras. Some such cameras might project an image into a users' palm or nearby table surfaces, though most are of limited use under full daylight.

Specialized Items

Below is an assortment of examples of the kind of tools players may find useful in specific cases. There are certainly entire books filled with fantastic near and far-future gear which can be drawn from, so this guide hasn't gone to great lengths to try to invent more. Also, many weapons and tech items are described in other sections of this manual. Consider this a few examples for inspiration and context.

A **Tracker** is a small device that discreetly transmits its location or provides a radio signal that can be triangulated.

A **Magic wand** is a portable multi-purpose hacking tool. It may contain a sonic/vibration-based lock pick; dedicated IR code flipper and multichannel keypad spiker. Although not exactly illegal, carrying one raises eyebrows and raises trust issues. Still, many rapid responders swear by them. It may interface with a cyberdeck or other wearables or operate independently. Most are custom made, and many are uniquely decorated, often with distinctive high-vis casings and markings.

Geckine spray/Gecko-tech gloves – Adhesive materials can be found manufactured into cloth or as a pair of spray bottles that build up layers of adhesive nano-statae-bristles. Be careful what you stick to what - neither the ceiling plaster nor your fingertip skin is strong enough to carry your full weight. But if used properly there's no end to clever applications (including daring strapless clothing fashions).

A **Universal Power Pack** is a device designed to be charged by and deliver power to almost anything. Modular, flexible connectors and smart electronics capable of adapting to a wide range of voltages, currents, and frequencies allows the device to tap into nearly any power source. IR, photovoltaic, and thermoelectric inputs can harvest power from the sun or even a campfire. The power pack can then be used to deliver power to sensitive microelectronics or defibrillate a heart. Beware of damage, though, as a damaged power pack can undergo a violent combustive discharge. Sizes vary by storage capacity.

An **External Tongue** is an engineered slime mold/bacterial symbiote that responds to trace amounts of various substances. An external tongue is stored in a portable incubator. When applied in a thin film to a surface it responds to the chemistry detected. A radio signal reflected off organic antennae allows the user to read the presence of broad classes of organic chemicals. Training the mold directly for 60 minutes on a specific target can dramatically increase its sensitivity to that target. The tongue is non-proliferative and harmless to the environment, though wiping it off after use is still good manners.

A **Field Surgery Unit** is a compact device the size of a small shoe box containing a set of micromanipulators and a magnified endoscope used for performing basic surgeries in any location.

A **Jumpframe** is a lightweight exosuit that includes retractable jump stilts and reach-extenders. Jumpframes allow the user to run at high speeds and leap incredible distances. Helmets and pads are advised.

There are already a lot of crazy **micromobility devices** in our world that many people don’t think about. In addition to skateboards, longboards, rollerblades, and rollerskates, we’ve got monowheels, electric unicycles, heelies, skate sticks, free wheels and so on. Feel free to include these and make any of these powered/portable/deployable in ways that make sense within physics but aren’t technologically possible yet.

Personal flying machines include a diverse assortment of light-weight rotor-powered flying devices. Some common forms include the flying disk (or flying saucer), with its counter-rotating blades inside a ducted fan and directional control surfaces underneath; the airboard, which packs many ducted electric propellers into a surfboard-like formfactor; or the classic jetpack, with its backpack and hand-mounted thrusters. All of these should be used in safe areas by properly trained operators using the standard safety devices.

F**all-arresting devices** include grapnels, mini-chutes, body-mounted airbags, and fast-expanding impact foam.

Flash-bags were developed for biological sampling, and are used by emergency responders for imposing near-instant medical stasis. The powered bag uses perfused cryoprotectant fluids and the sublimation of dry ice and deep phase change material to cryogenically flash freeze samples. If used successfully, flash-bags can preserve a patient with no life signs in order to prevent brain death following grievous bodily injury until they can be placed on extreme life-support.

Glowmidges were first made in the 12hr aftermath of the ‘44 quake. Cultured populations are kept in small chilled boxes the size of a hand. Once warmed and awake, the hungry midges swarm, tracing CO2 in the air and glowing faintly. Aside from sipping on rescue workers, they rest and cluster on the rubble. The result is a small ring of glowing circles, highlighting gaps in the rubble above any survivors, as their breath slowly rises out to the night sky. Similar midges can be developed to visually trace most gasses.

Holodome Projector Beloved of cyberspace architects, educators and many synths, a holodome projector fills a darkened room with immersive holograms, sometimes keyed to realism, sometimes extravagantly stylised.

A **collapsable sword** or mema sword is one in which extremely precise machining and the creative use of materials capable of undergoing a slight controlled expansion and contraction allows for the construction of a sword that can collapse down to a fraction of its length. A common benchmark is for a sword with a 60 cm blade and 20 cm hilt collapsing down to 30 cm in length. When at its full size, the press of a button allows it to telescope down in size when pressed against a firm surface such as the ground, and when compacted the press of a button rapidly telescopes it out to its full length.

Like most advanced and dangerous weapons, the most commonly accepted practice of obtaining a mema sword is to earn it as a gift from a respected craftsman. For swordsmen, they typically must describe publicly or at least widely within a martial artist organization a circumstance in which they used a conventional sword responsibly and with appropriate restraint. They then explain why they believe they should have an extending sword, ideally by citing how having one would enable them to continue to demonstrate proper responsible use of a sword for constructive purposes. Sometimes they may be loaned one, and if they later show an ability to wield it with honor and restraint, they will be gifted one

by a master swordsmith. Grey market mema swords are obtainable, but subject to the same restrictions governing any grey market weapons.

These make an excellent upgrade item for sword-using characters. They perform in combat the same as a conventional sword, but in addition to being more concealable, the extending sword offers a +3 advantage to intimidation checks. If one wishes to acquire this as a player, communicate that as a goal to your GM.

A **conventional extending bo staff** consists of a telescoping housing that allows such a staff to extend from 45 cm to 1.5 m. Offers a +2 advantage on intimidation checks.

A **mema bo staff** is similar to a conventional extending bo staff, however instead of telescoping, the mema staff uses air pressure to rapidly inflate a flexible-to-rigid inflatable body before it converts back to rigid. This allows a full-length staff to compress down to around just 20 cm or less. Offers a +3 advantage on intimidation checks.

Lugger ants are a pack of biomimetic ant robots. When not in use it will cluster up around a user's shins or in a pouch. Spray an item with the pink 'collect this' spray, and the ant swarm will get under it and follow the user about. You can also send them off on a path using the mauve 'follow this' spray. Don't confuse them!

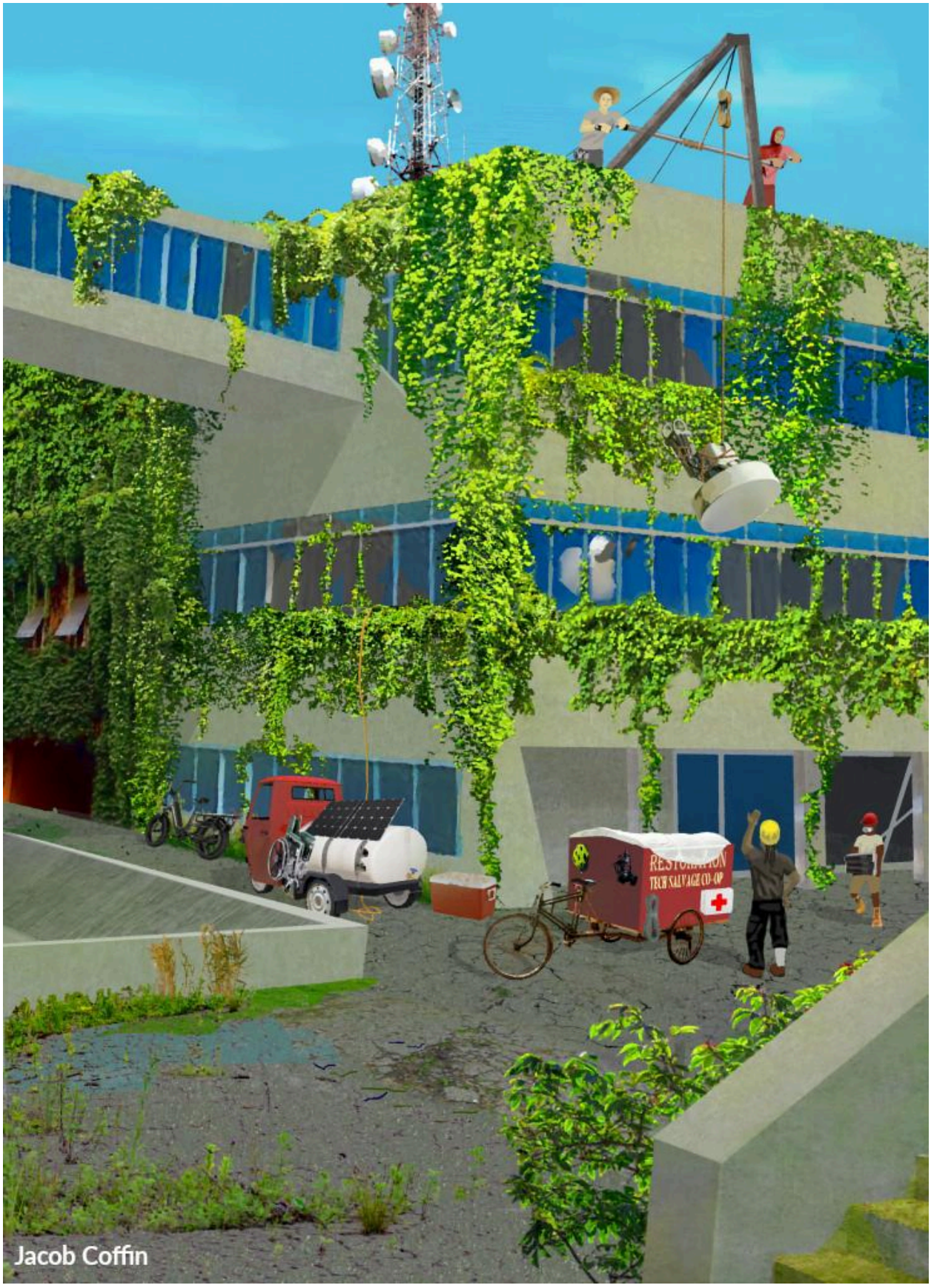
A **Harvester's pouch** is a bag designed to preserve fruit and vegetables when picking. The harvester's pouch is capable of taking out 'field heat' to keep things fresh, or even freezing/freeze-drying your bounty while you cycle home.

Software Tools

Readers are encouraged to be expansive in their imagining of the kinds of digital assistive tools available though AR/XR. Video playback of a recent event, frequency isolation, live translation, voice identification and such should generally be considered widely available.

Readers are also encouraged to imagine ways these tools would be employed for accommodating disabilities and differences in physicality and neurotypes. Players and GMs are encouraged to imagine live captioning for the hearing impaired; identification tools for the face-blind; and countless other apps for mitigating dyslexia, dyscalculia, attention deficits, sensory sensitivities, and so on.

Any such tool should also be understood as a general-purpose asset for anyone who wants it, and not as a signifier of incapability or an exclusive tool limited to people who meet diagnostic criteria to demonstrate their need. All of these systems are meant to help people better understand the world around them. Within the world of Fully Automated, our concept of "able-bodied" and "disabled" is far less common than a holistic understanding that each of us throughout our lives experience a wide range in our ability to perform various functions. Most people don't consider sight impairment a disability if it's correctable with eyeglasses. In the same way, the universal availability of prosthetics and computer assistance with cognitive obstacles have made many conditions we consider "handicaps" today into unremarkable ways of experiencing the world.


Jacob Coffin

Combat Mechanics

Tastes vary, and as an open-source game, we strive to cater to that. Attitudes towards the role that combat should serve in a story and the player experience associated are diverse, and will shape a table's needs. We recommend several options to consider in how to approach combat.

Option 1: Fully Automated's standard combat

The standard combat system is a custom map-based fighting system that we think captures the chaos of a fight in a way that is fast, easy to plan, and surprisingly fun. It can be intimidating in appearance because it's unfamiliar, but we strongly encourage readers to try it before they dismiss it.

Option 2: Fully Automated's light combat

For readers who have no interest in preparing maps or simply like combat to be conducted through descriptions alone, we suggest our light combat system.

The light combat system is an adaptation of the standard combat system in which the map is replaced with descriptions and the outcomes are largely based upon the GM's discretion. Instructions for running narrative, mapless combat are provided after the standard combat system, as we suggest GMs familiarize themselves with the standard system in order to use it as inspiration when running the light combat system.

Option 3: Anything else you like

You may want a combat system your players are already familiar with, or you may want to adjust the sense of danger and lethality to the tone of your campaign, or to modulate the players' behavior.

GURPS or Apocalypse World may be decent candidates. There's an obscure cowboy game called Boot Hill with very dangerous, high-lethality combat that some players like because of the way it inspires a realistic fear of armed combat.

And if you and your players want to consider any physical altercation to be a failure state and simply hand wave it or roleplay the outcomes, that's your option as well.

If you try any of these substitutions, let us know how it goes! We're always looking for ways to provide additional resources and recommendations to our players.

Why Include Combat?

Admittedly, this can all feel incongruent to some readers. Why did we put so much effort into describing fighting? Isn't the game predicated on a world where people eschew a worldview of domination and violence?

First, keep in mind that you're free to disregard all this. You don't have to play combat scenarios, or use these systems.

That said, there were several reasons we developed them. The first is that physical confrontation is a staple of adventure games, and for understandable reasons. Not only have audiences always found violence narratively compelling, it is the inevitable final arena of conflict resolution when every other means has failed. By designing the system, we can design the experience. We can make violence feel threatening and unpredictable, as it should. We can also design it so that fights typically end in circumstances other than just bludgeoning an opposing miniature to death.

Even if you don't like running combat (and we're right with you), having a combat system that is easy for a GM to use raises the stakes when situations get tense. Knowing that a fight is possible and easy for the GM to run in-game makes the risk of violence more present from the metagame perspective of players. This increases the stakes and instills standoffs with a higher urgency to deescalate.

Lastly, there's just the simple fact that if we're going to release a game, it's our opportunity to do things the way we think is right. We'd never seen a combat system we liked, and we developed one that we happen to think is quite remarkable. So this was the chance to try to show off the way we think combat should be done.

Standard Combat

The standard combat system is meant to be simple without becoming determinative by relying on a rock-paper-scissors mechanic. If you think your opponent is going to play an attack, play Defend. If you think an opponent is going to defend, play the Aim action to buff your next action or the Move action to get to a better position. And if you think they're going to play the Aim or Move action, then attack.

Taken together, each player's available actions are few, but players' have open options for how aggressively or defensively they wish to approach an encounter.

Pre-game setup

- ☐ **Map** - Maps can be found in the game accessory files, and instructions for making maps are provided under Resources for GMs.
- ☐ **6-sided Fudge Dice** - Also called Fate dice. Buy a set or use a virtual dice roller.
- ☐ **Action Cards / Actions & Items sheets** - The game does not require physical cards, but the action cards – held or arranged on the Actions & Items sheet – make referring to them easier.
- ☐ **Character Tokens** - These can be miniatures, coins, or small pieces of paper.
- ☐ **HP Trackers** - Our preferred tracker is a piece of cardboard with a plastic slider.
- ☐ **Indicators** - Anything you can place on a character token or beneath it for marking a character as stunned or having aimed
- ☐ **A turn order tracker** - We recommend writing names on a notecard.

Starting Combat

- [ ] **Lay out tokens on the map** - It's recommended that combat encounters start with adversaries about 10 spaces apart.
- [ ] **Establish Turn order** - Characters' turn order is their speed plus a 2d10 roll.
- [ ] **Instruct players to select their first move** - Once everyone has selected their first move, the first round starts and combat begins.

Running Combat

Instruct players to reveal their action for the round.

GMs should ask new or casual players to confirm that they're ready before instructing them to reveal their action. Once players understand combat though, it's recommended that the GM establish a ten-second selection period and then instruct players to reveal. Any player who hasn't decided on their action defaults to the Defend action.

Resolve Attacks.

Identify all players playing an attack action and instruct the one highest in the turn order to identify their target.

If their target is defending, have the target player move and roll if necessary to determine whether the attack proceeds. In combat, rolls are made with 2 fudge dice (2dF) and can range from +2 to -2. The effect of a given roll is listed in a table on the action card.

Move through each attacker in order of initiative until all attacks are resolved.

Resolve unused Defend actions

Allow players who played a Defend action but weren't attacked to move one hex.

Resolve Movements

Allow players who played the Move action to move, typically in reverse of turn order.

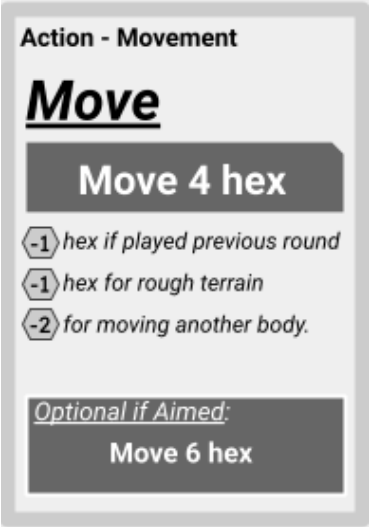
Resolve aiming and any other special actions

Identify and mark any characters who successfully played Aim or another special action.

Instruct players to select their next round's action

Once a round is resolved, players select their action for the next round.

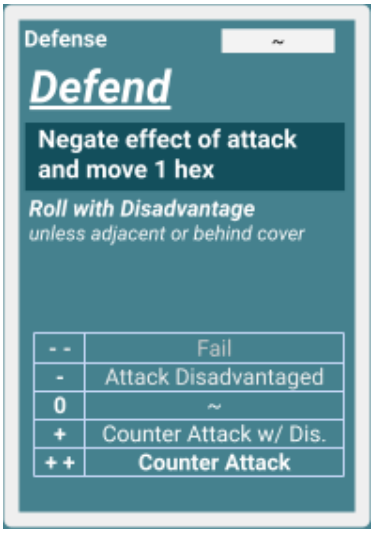
Combat Actions



The **Move** action lets players move the specified number of hex spaces.

A standard movement distance is 4 hexes. Players can use an aim condition to move 6 hex spaces.

Movement through allies is unimpeded. Movement over furniture or challenging terrain or through an adversary costs an additional hex of movement. Moving another person – assuming they're not cooperating – costs two hexes of movement. Players also move one hex less if they played Move on the previous round.



The **Defend** action lets characters move one hex and roll to deter an attack against them. The result is based on a 2dF roll:

[-2] – The defense fails and the attack proceeds.
[-1] – The attack proceeds with disadvantage.
[0] – The attack against them fails.
[+1] – Attack fails; Defender counter-attacks with disadvantage.
[+2] – The attack fails and the defender gets to counter-attack.

If moving takes a character out of attack range then the attack automatically fails without any dice rolls.

Defense is disadvantaged if a player is not adjacent to either the attacker or cover, and if the attack against them is aimed.

Cover is any feature of the environment that provides protective benefits while still allowing a player to attack. This includes low obstacles like tables and furniture as well as high obstacles like door frames and columns (and other characters!). To qualify as cover, three conditions must be met:

- ☐ Cover must at least partially obstruct the line of sight between attacker and defender.
- ☐ A character must be in a hex adjacent to a feature for it to qualify as cover.
- ☐ A character must be able to attack from their position.

The point of cover is that it assists in defense while still allowing a player to attack and be attacked. A player cannot hold a position from which they claim the ability to attack a target while also claiming to be obstructed from attacks from that target.

Cover does two things:

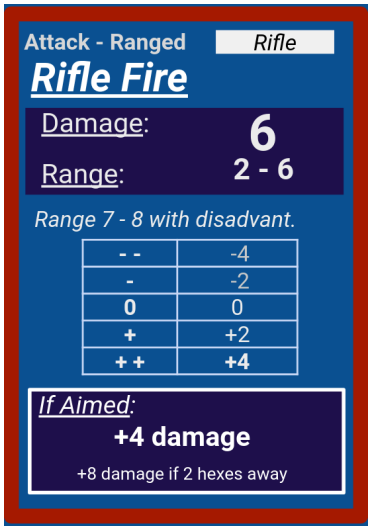
1) It allows a player to defend against ranged attacks without disadvantage, and
2) It reduces damage from ranged attacks across that cover by 1 point (regardless of whether Defend is played).

An **Attack** action deals the specified damage and effects to a target within range. Most attacks vary in their outcome based on the result of a 2dF roll. The outcome table applies a modifier to the standard effect, so an outcome of 0 on Rifle Fire action delivers the standard base damage of 6 HP.

*If an attack deals a **Stun** effect, the target is limited in the next round to defending with disadvantage. They may still use their one hex of movement. Multiple stun effects compound.*

***Optional Rule:** If a character is stunned before they resolve an attack played in the current round, apply disadvantage.*

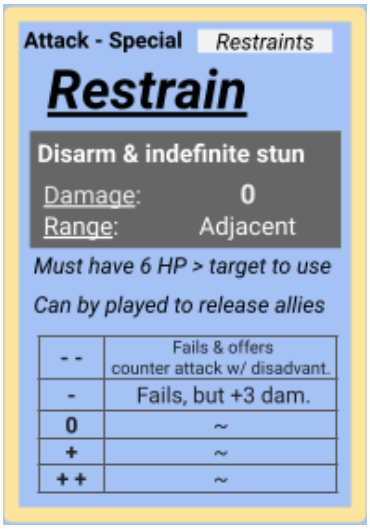
Ranged attacks can be attempted at a distance of 1 or 2 greater than their stated range, but are disadvantaged.



A character who is restrained is left in the stunned condition indefinitely. To restrain a character, the player must be adjacent and have more than 6 HP greater than their target.

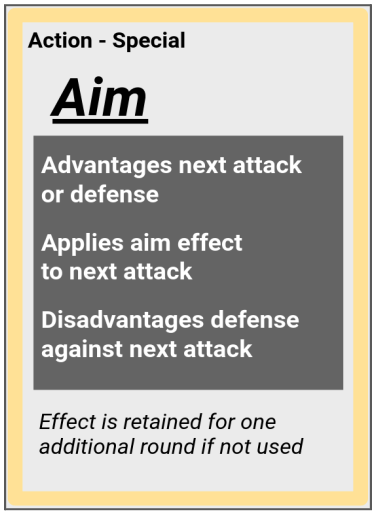
[-2] – The attempt fails; target gets a counter-attack w/ disadv.
[-1] – The attempt fails, but the target takes 3 damage.
[0] or higher – The target is restrained.

The restrain card can also be played to release a restrained ally.



Aim: If a player uses their action to **aim** and doesn't take damage during the round, then they can apply the aim condition to their action on the next round. If they take no damage, players can withhold their aim condition to the following round one time. After the second round it expires.

- Attacks made directly after aiming are rolled with advantage and impose any aim effects written at the bottom of the action card.
- Aim applies disadvantage to a target's Defend action.
- If a player moves after aiming they can choose to apply the aim condition to their move in order to move six hexes. Or they can move a normal distance and reserve the aim condition for the next round.
- If a player defends after aiming and is attacked, they defend with advantage unless they move out or range to prevent the attack. If so, they can reserve their aim condition to the next round.



Players also have the option to re-roll their initiative roll whenever they play the aim action, but must use the result.

Additional Combat Rules

If a character has **armor** they subtract that value from the damage inflicted by each attack. Light armor reduces damage by 1 point. Heavy armor by 2 points. Each point of armor imposes a -1 disadvantage to Charisma checks.

If a character reaches or falls below 0 HP or is **restrained** using the restrain action then they become **incapacitated**. The effect is the same as being stunned. They remain lucid and can speak, but cannot perform any action besides defending at disadvantage. They may move one hex space per round.

If they fall below -10 HP then they are **dying**. They no longer can perform even the defend action. They remain conscious but take one additional point of damage for each round or every 30 seconds until stabilized. If they reach -20 HP then they are **dead**.

Discerning Cover and Line of Sight

Here are some tips to help reduce uncertainty over whether a character is covered:

1. If a line can be drawn from any part of a target's hex to any part of their attacker's that doesn't pass through a full-height barrier like a wall, they have a line of attack.
2. If a line can be drawn from any part of a target's hex to any part of their attacker's hex that passes through an obstacle (and the target is adjacent to it), and they still have a line of attack, that's cover.
3. If in doubt, assume it's cover.

Ranged attacks require an unobstructed line of sight unless specified otherwise. When a line of sight is partially blocked or obscured by foliage or smoke the attack can be made at disadvantage. Players cannot target an object obstructed by another character.

A review of cover relative to the red dot:

- *Hiro is behind cover.* He can defend without disadvantage, and would take 1 less point of damage.
- *Pulsa is adjacent.* She can defend without disadvantage, but doesn't get the armor benefit of cover.
- *Hypebot is exposed.* If he defends, it's disadvantaged.
- Dusty is behind cover. She can defend without disadvantage. If dealt damage, she takes one point less, but Hypebot takes it instead.
- *Windrush is obstructed.* She can't attack or be attacked.

A review of how to resolve a round of combat

Once all players have selected and revealed their actions they are resolved in this order.

1: Attacks

By order of initiative, each attacker picks their target. If the attacker has a movement associated with their attack, they can use it to come into range, come back into range after a target moves, or step out of range after the attack.

If the target is not defending, the attacker rolls their fudge dice and reports the effect.

If the target is defending, the target may move 1 hex space. If they're still in range, or the attacker can move back into range, the target rolls their fudge dice to determine the success or failure of their defense.

2: Unattacked Defenders

Once all attacks have been resolved, any players who played a defense who were not attacked have the opportunity to move one hex space.

3: Movements

After resolving attacks and defenses, players who played a movement action have the opportunity to move. Moving later allows players to react to where their opponents moved, so the GM will assume all players wish to go in reverse turn order and start by asking the player lowest on the turn order who has played move to go first and proceeding upward. If a higher-initiative player wishes to move earlier in the turn order they're free to interject to exercise that prerogative.

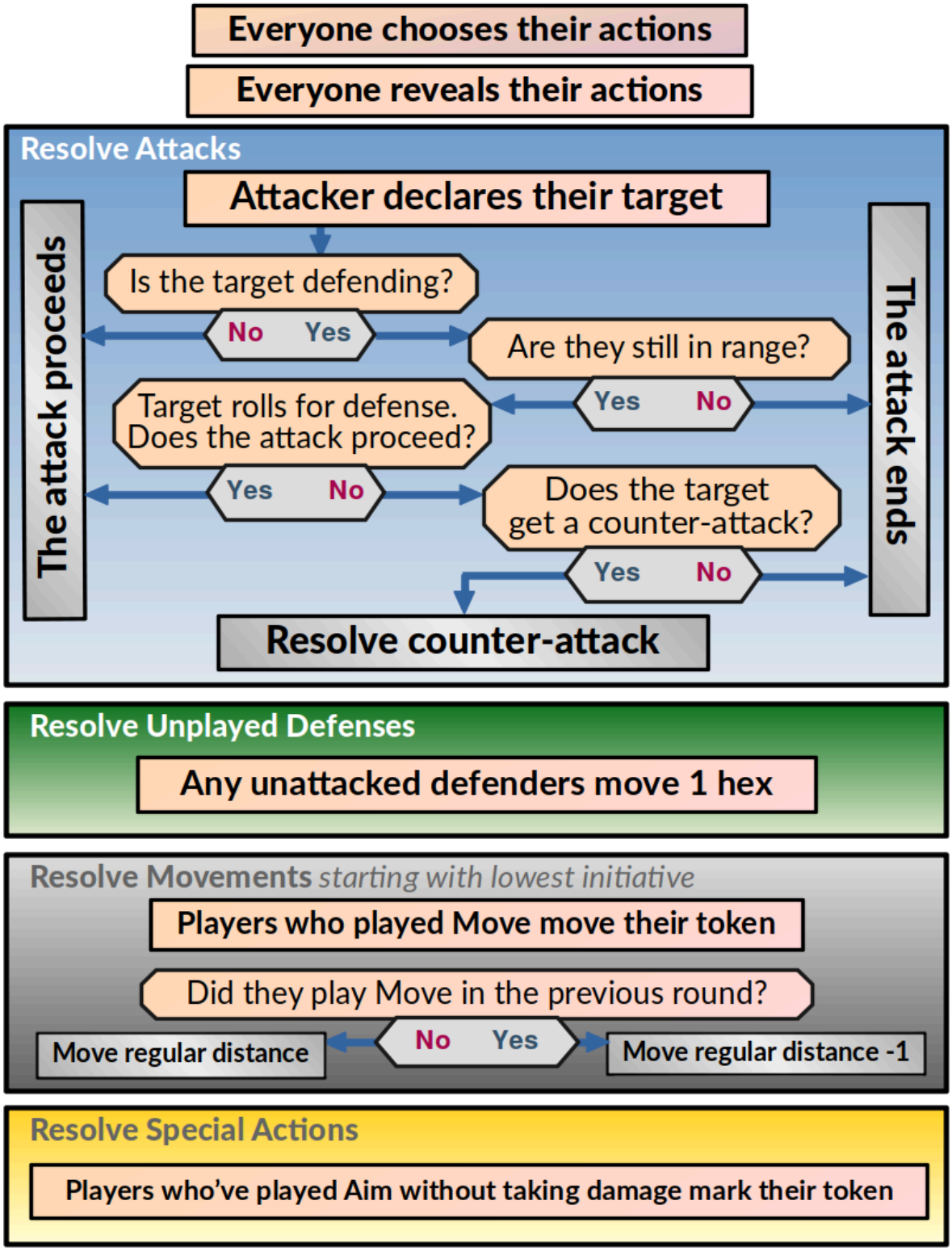
4 Aiming and Special Actions

After the movement phase is complete, any players who played an aim action and took no damage mark their tokens as having aimed. This is also when any other special actions like healing or hacking would take place.

The round ends. The GM should announce who is stunned, who has aimed, and who is behind cover and then tell players that they have 10 seconds to choose their action for the next round.

This concludes the basic combat rules! Further reading explains the effects of different attack cards and player special abilities and is optional. To see how these rules work in practice or try some scenarios yourself jump to the Example Combat Encounter.

Below is a cheat sheet. It is not meant to teach the rules, only as a reminder.


Everyone chooses their actions
Everyone reveals their actions
Resolve Attacks
Attacker declares their target
Is the target defending?
No
Yes
Are they still in range?
Yes
No
Target rolls for defense. Does the attack proceed?
Yes
No
Does the target get a counter-attack?
Yes
No
Resolve counter-attack
The attack proceeds
The attack ends
Resolve Unplayed Defenses
Any unattacked defenders move 1 hex
Resolve Movements starting with lowest initiative
Players who played Move move their token
Did they play Move in the previous round?
No
Yes
Move regular distance
Move regular distance -1
Resolve Special Actions
Players who've played Aim without taking damage mark their token

Light Combat

The light combat system is meant to offer a succinct alternative to people who don't like devoting any more energy to preparing or running combat than necessary. Ultimately, it's assumed that most GMs run their combat as a hybrid of approaches rather than one system or another, so both the standard and light versions are presented as possibilities on a spectrum of options to be hacked as necessary.

Like the standard system, the light combat system consists of rounds in which GMs ask the players to quietly choose their action, then reveal them all simultaneously. However there is no map, and the system of determining effects is much more subjective.

Pre-game setup

- ☐ **d10 Dice**
- ☐ **Character Sheets**

Running Combat

Instruct players to declare their action for the round.

When a fight or other fast moving action sequence begins, ask everyone to think of what they do at that moment. Players may be advised to declare their action in similar terms to the standard combat actions listed on their character sheet ("Move", "Defend", "Punch", etc.), or just declare anything so long as it's a single non-run-on sentence.

Go around the table and resolve actions

Resolve actions by instructing players to make a relevant skill check, such as [Strength + Combat] or [Dexterity + Athletics] if necessary. Work clockwise or in whatever order makes sense based on the actions being played.

If so inclined, consider instructing players to declare when moving if they're moving into or out of cover or close contact.

Repeat until the pace of action doesn't require rounds

Have players declare their next action and repeat until the scenario no longer requires everyone describing what they're doing at the same moment.

> **Be sure to share what works for you!**
>
> If you find a variation on this that works for you or like to use a totally separate system entirely, share it with the community!

Combat action full descriptions

Attack proficiencies are chosen during character creation based on the number of skill points allotted to Combat. These are listed on the character sheet under Combat Actions.

To use an armed combat action, players must have the required weapon on them. Characters are expected to carry weapons in a realistic manner. Some are discreet, but many are too large to conceal and will draw strong negative attention. There is no mechanistic effect to carrying a rifle, but the GM will roleplay NPC reactions accordingly.

Players can use a weapon they don't have proficiency in, but with disadvantage. Once players have decided which weapons they'd like to use within a session, they should place the relevant cards onto their Actions & Items sheet to reference during play. **Action cards for printing or copying can be found here.**

Players can print and cut out cards or copy and paste their images into whatever program lets them view images conveniently for virtual play, such as LibreOffice Impress.

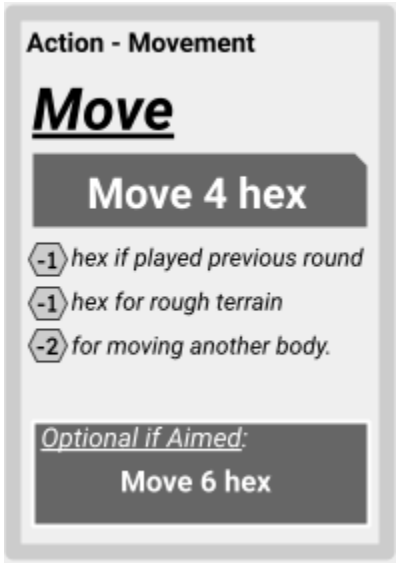
Weapon skills by cost

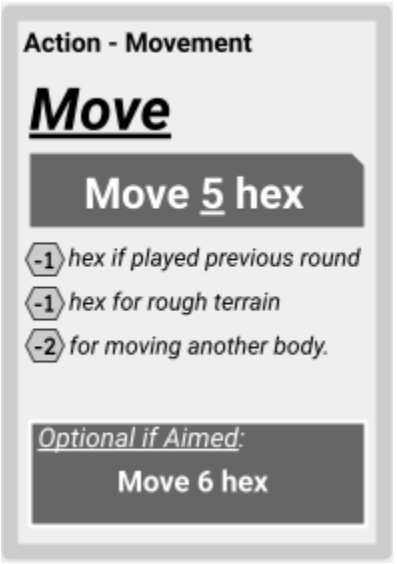
Cost	Attack	Range	Weapon	Threat profile	Portability / Concealability
0	Punch	1	No	0	3
0*	Claws	1	No	0	3
0	Spray	2	Yes	1	2
0.5	Knife	1	Yes	1	2
0.5	Club / Improvised melee	1	Yes	1	1
0.5	Pistol	4	Yes	2	2
1	E-baton	1	Yes	1	2
1	Slingshot / Nanodart (includes Pistol)	5	Yes	2	2
1.5	Shortbow/Crossbow (includes nano)	4/8	Yes	2	0
1.5	Microdarter / Rifle (Comes with pistol)	6	Yes	2 3	0
1.5	Whip	4	Yes	2	1
2	Trained Strike (includes e-baton)	1	No	0	3
2	Sword (includes e-baton and club)	1	Yes	2	1
2	Bo Staff / Spear	2	Yes	1 / 2	2
2	Improvised throwable	4	Yes	1	3
	Shuriken/Throwing knives			2	2
2.5	Glue Gun (includes all gun weapons)	5	Yes	2	0

Move

The Move card allows players to move as their action for a round. The default movement distance is 4 hex spaces, though it can be increased

if they haven't played this card in the directly preceding round. If played in direct succession the following round then movement is limited to three hex spaces. Movement over rough terrain or across obstacles like furniture requires the use of one additional hex of movement.

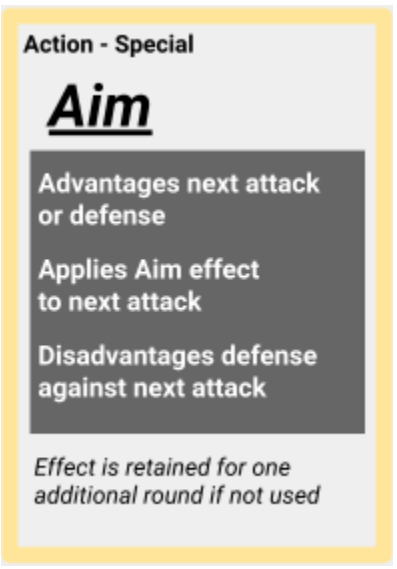




Defend & Aim

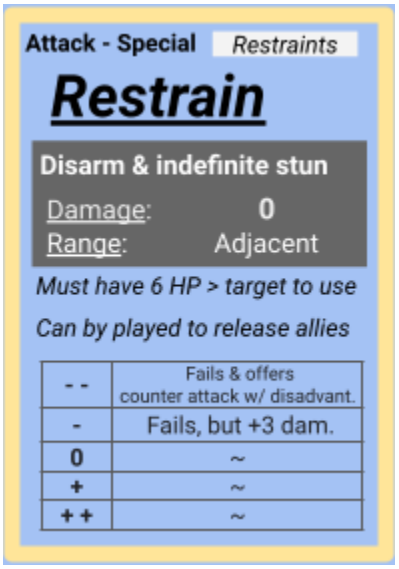
The Defend action allows players to attempt to negate an adversary's attack and possibly deal a counter-attack. Its use assumes that the player is either performing a close-quarters defense or using environmental cover, which means that it is disadvantaged if a player is not adjacent to their attacker or cover.

The Aim action advantages a player's next action.



Restrain

The Restrain action is a special Attack intended to be used to end fights more quickly and with less violence than simply incapacitating adversaries. The player playing it must have more than 6 HP greater than their target to restrain them. This action requires the character to have restraints on them. From a narrative standpoint, restraints can be carried in a concealed manner, and the degree of menace carrying restraints would be circumstantial to the person carrying them. For players who are emergency responders of some kind, this would not appear to most people as untoward.

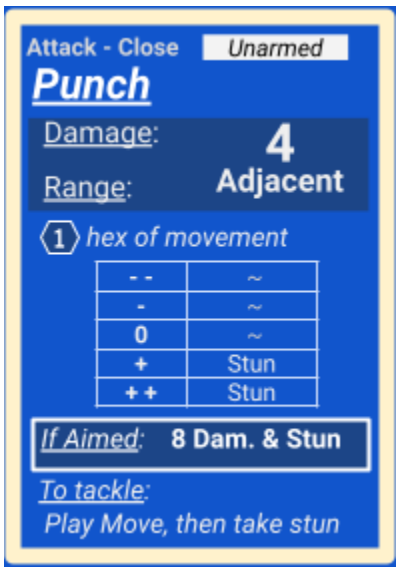


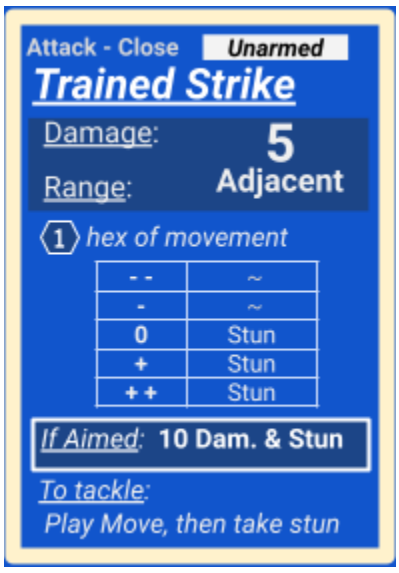
The action is successful unless a player rolls a [-], in which case they deal 3 damage but fail to restrain the target, or a [- -], in which case the target is afforded a Disadvantaged counter attack.

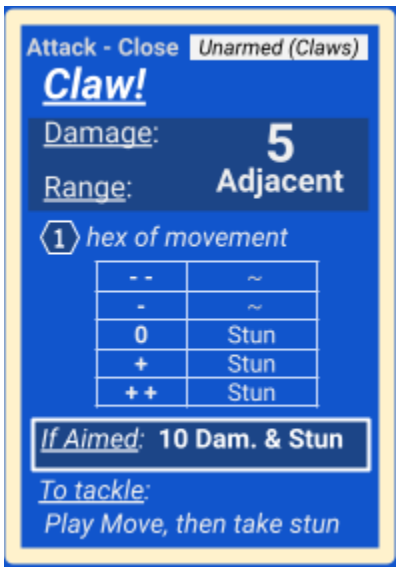
The restrain action can also be played to release a character from restraint. If a player wanted to attempt to break free from restraint, that would require a skill check determined by the GM, such as [Dexterity + Athletics] disadvantaged by 4.

Unarmed Attacks

Every character always has an unarmed attack that can be played without the use of a weapon. Like most close-quarters attacks, the unarmed attack affords one space of movement, before, during, or after performing the attack. An unarmed attack can also be played as Tackle. Doing so allows a player to play Move on the same turn, but in doing so will stun the attacker. This can be a useful tactic for bystanders with no other use in combat.







Spray, Taze Strike, and Club

The Spray, Taze, and Club attacks are all close-quarters non-lethal melee attacks. Spray costs 0 skill points, Club costs 0.5, and Taze costs 1. They must be performed adjacent to their target, but they offer one hex of movement that can be used to come into range, retreat, or come back into range after a target moves using the Defend action. The Spray action requires a chemical sprayer, and Taze Strike requires an electric baton (or similar). The Club action can use a collapsible baton, a cane, or a found item like a fire extinguisher.

They are designated as non-lethal to help facilitate roleplay. There is no strict rule governing differences in play between a lethal and non-lethal weapon, but when attempting to negotiate, the GM should apply appropriate modifiers to reflect how people respond differently to pepper spray versus a pistol.

Staff Strike & Spear

Staff strike is a non-lethal melee attack that can be used from a distance of 2. It costs 2 skill points and comes bundled with Spear.

Either may be carried as a walking stick, worn across the back as a visible weapon, or come in a collapsible variety. For details on how to acquire a collapsible bo staff, see Regulation of Weapons.

Stab & Sword Strike

Stab costs 0.5 skill points and requires the character to have a knife. Sword Strike requires a sword and costs 2 skill points. The sword proficiency includes proficiency with a stun baton or improvised club as well. Like the other melee and close-quarters attacks, both allow for one hex of movement while attacking.

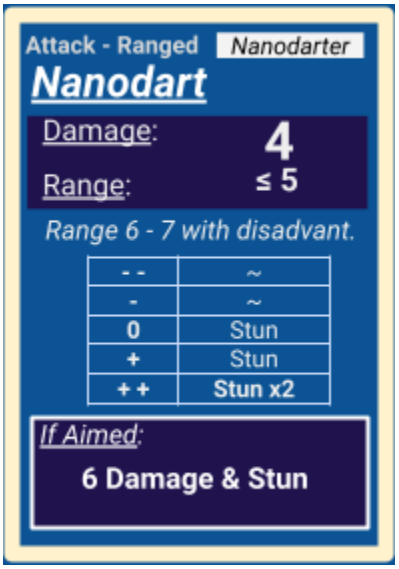
Pistol Shot and Rifle Fire

The pistol proficiency costs 1 skill point and does what a pistol does: it's small enough to hide, and dangerous enough to threaten and kill.

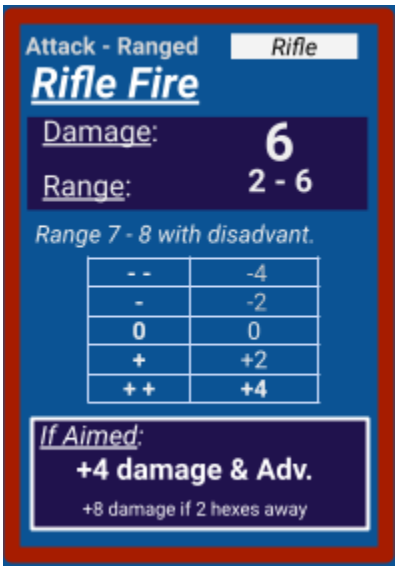
It can be used from five spaces away or less, or seven spaces with disadvantage. Aiming increases its damage by 4 in addition to providing Advantage. If fired from an adjacent hex after aiming, it deals 13 damage before applying the advantaged fudge dice modifier.

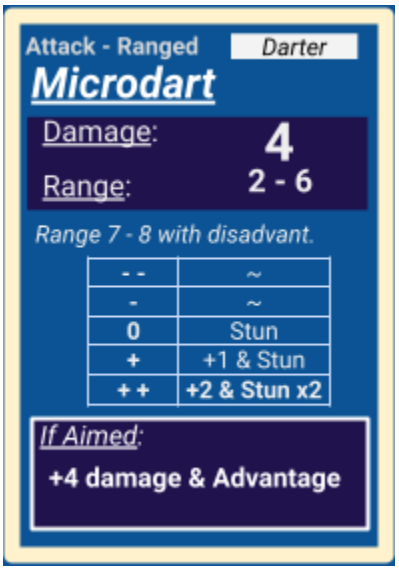
Slingshot & Nanodart

Slingshot and Nanodart cost one skill point for proficiency in both. The slingshot fires pucks that carry a stunning charge, while the nanodarter is a compact pistol-like version of a microdarter. They serve as simple, compact, non-lethal ranged weapons. Both have a range of 5, but can be fired from 7 hexes with Disadvantage. Both deal modest damage, but have a high likelihood of stunning.



Rifle Shot & Microdarter





The rifle deals high damage from a distance. It has a base damage of 6. Like the pistol, this goes up by 4 if aimed or 8 if aimed and fired from its closest range. Its range is 2 - 6 spaces, but it can be fired with Disadvantage from 7 or 8 spaces or an adjacent hex.

The microdarter is a non-lethal rifle that electromagnetically fires extremely thin metal darts. The darts receive an electric charge when fired and are highly effective at stunning organic and mechanical creatures without causing gross bodily harm.

Proficiency in both costs 1.5 skill points and includes proficiency with a nanodarter & pistol.

Piercing & Stun Arrow

The piercing arrow and stun arrow attacks are similar to the rifle and microdart attacks, but for people who love archery. They can be described as using a shortbow or a miniature handheld crossbow. They cost 1.5 skill points and include the nanodart / slingshot proficiency.

Knife Throw & Yeet

The ability to precisely throw items is packaged as a single proficiency that costs 2 skill points. It can be used to throw knives, shuriken, or a drinking glass. The knife throw action affords two hexes of movement, while the yeet action offers greater range.

Like a tackle, it can be useful to remember that unskilled characters (including NPCs) can throw items with Disadvantage. They may not deal meaningful damage, but this can be a useful approach to prevent adversaries from successfully playing the aim action.

Glueshot & Whip

The glue gun costs 2.5 skill points and includes the microdarter, rifle, pistol, and nanodarter. It does no damage, but can stun and possibly restrain targets. The whip action costs 1.5 skill points, and offers a range of 3 and one movement action. These attacks offer a glimpse of the ways an industrious player can invent new and interesting fighting styles. As long as the rest of the table think it's balanced, go wild, and share what you make with the developer group for inclusion in later editions.

Aiming and Special Rules

Under standard rules an aim action is only valid if the player doesn't take damage on the turn in which they play it, but a GM can choose to make aim actions effective regardless of damage if they wish to increase its use in the game. They can also adjust the duration within which the action can be used, either by allowing it to be kept longer or requiring that it be used sooner. Allowing aim to be performed despite taking damage and requiring that it be used immediately has the effect of making combat faster and increasing the typical damage within each round.

Alternative Rules

The combat system has been tested with many possible rules. Here are some we considered but left out. Feel free to use them if you like.

Cinematic Mode

In Cinematic Mode, all natural critical fail rolls (rolls of [-2]) made by players are rounded up to -1. This naturally biases play in the favor of players and guarantees that they never experience a full failure unless disadvantaged.

Two-action rounds

All actors in the fight select two actions to play in sequence within a round. Actions are resolved in the same order as in one-action rounds, but without an action selection step between the two selected actions. This was found to be a stable form of play, but is harder to run. Players looking for a more chess-like experience may find it worth the effort.

Fixed turn order

A table can decide to resolve actions strictly in turn based on the established turn order. Turn order can be unchanging or it can rotate so that the first person to go in each round moves to the last place so that lower-order players eventually get opportunities to be first if the fight goes on long enough. This simplifies the process of resolving actions, but was felt to give too much advantage to the characters who got to perform move actions before attackers could attack.

A few others

~ If a character is stunned before they resolve their attack, apply disadvantage.

~ A player making an attack gains no armor benefit from cover.

~ Players aiming are defending at a disadvantage, and aim actions are successful regardless of damage taken while aiming. This has the potential to greatly increase damage taken during combat.

An example combat encounter

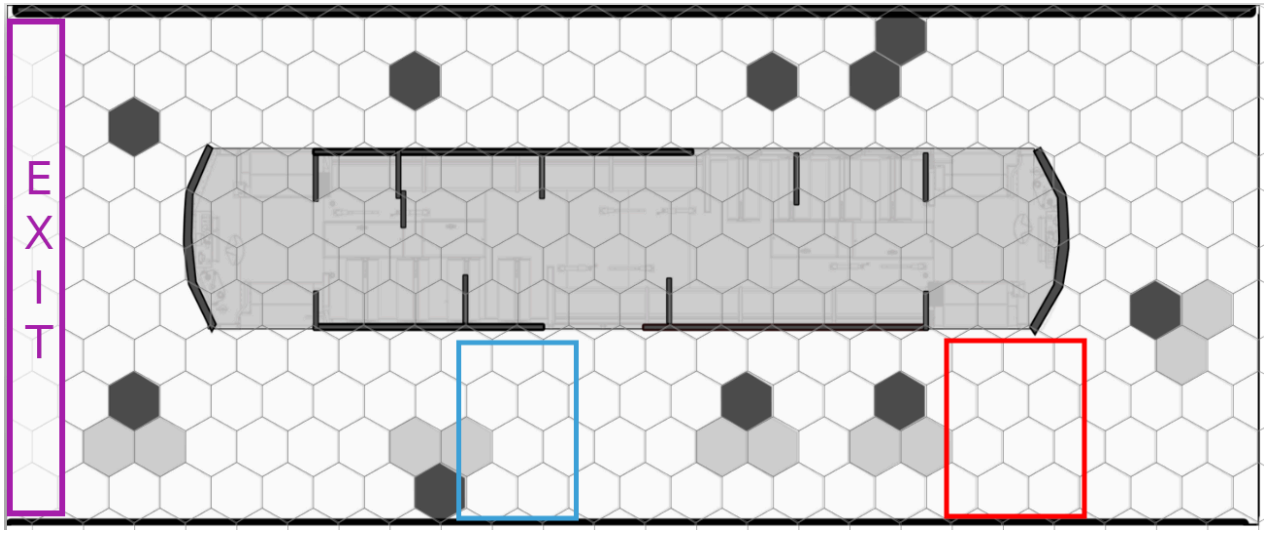
This combat encounter is meant to serve as the tutorial encounter for new players.

Characters	HP	Armor	Speed	Attacks
Dusty	24	0	24	✊ Punch 🗡️ Billy Club 🏹 Slingshot
Windrush	22	0	20	✊ Punch 🗡️ Bo Staff 🏹 Mini Crossbow
Hypebot420	26	0	16	✊ Trained Strike 🗡️ E-Baton 🏹 Slingshot
Voidstar	19	0	23	✊ Trained Strike 🗡️ E-Baton 🏹 Microdarter

This is where the Actions & Items sheets are useful: as quick references during fast action.

These are the action cards used in this encounter. Keep in mind that typically, each player only has to keep track of one or two attacks.

The Trolley Factory



Setup

This encounter takes place in a cyberspace simulation meant to allow combatants to learn and test any and all tactics without causing actual harm.

The environment is an assembly and repair bay of a trolley factory, in which a partially assembled trolly is surrounded by assembly arms and tool stations.

Within the simulation, players are placed on two teams. Each team consists of loved ones of a different synth that is in imminent danger of succumbing to a fatal case Progressive Compositional Cascade Syndrome. The loved ones of Athena and Benny have both learned that there is a rare quantum computing module in this factory capable of stabilizing one synth's positronic brain. Team Athena arrived first and retrieved it. But while attempting to leave, Team Benny blocks their path.

Within the simulation, teams can roleplay any approach they like, but it's understood that both are motivated to recover the module by any means necessary. Players can decide for themselves whether the character's prior relationship makes their use of violence dispassionate or vindictive. But both sides are motivated to hold nothing back to win.

The characters start ~10 hexes apart. The module is carried in a fanny pack. Players on team Athena should decide privately who has the module, and who has an empty decoy pack.

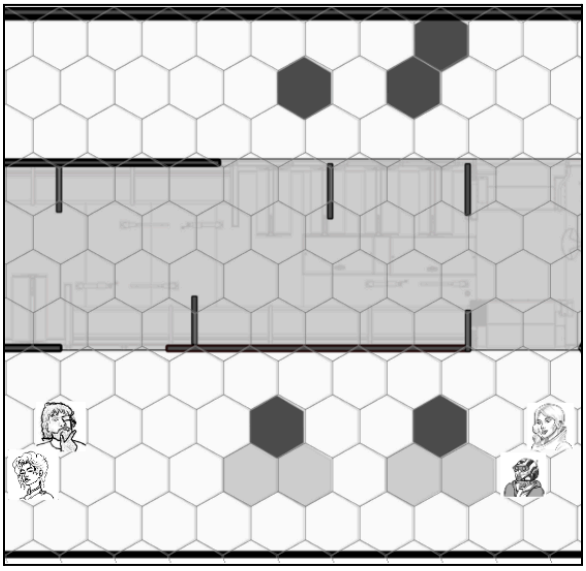
> Descriptions of the action have been color coded to highlight how to resolve the phases of each round: attacks; defenses; movements; and special actions.

Roll for initiative:

Each player rolls 2d10 and adds it to their speed.

Characters	Speed	Roll	Initiative
Windrush	20	14	34
Voidstar	23	10	33
Dusty	24	3	27
Hypebot420	16	9	15

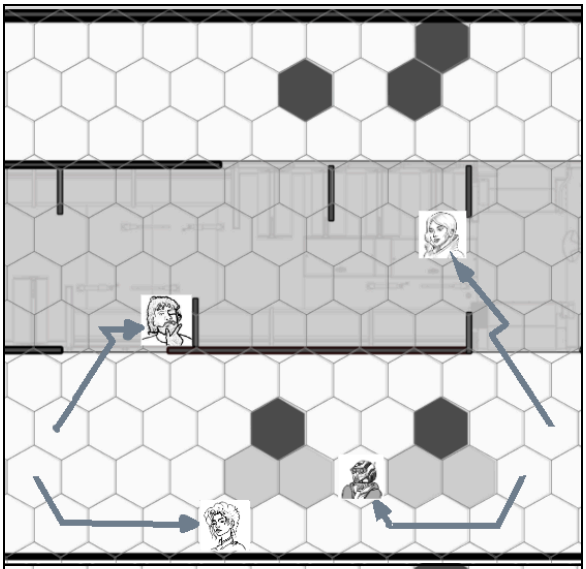
Dusty has the module.



Round 1

Character	HP	Action	Damage
Windrush	22	Move	
Voidstar	19	Move	
Dusty	24	Move	
Hypebot420	26	Move	

On the first round, everyone plays Move. Hypebot advances to a covered position. Dusty moves into the trolly (it costs an extra space of movement to step up onto the trolly deck, but Dusty has a +1 to Movement). Voidstar advances to a covered position in the trolly, and Windrush moves to cover to oppose Hypebot.

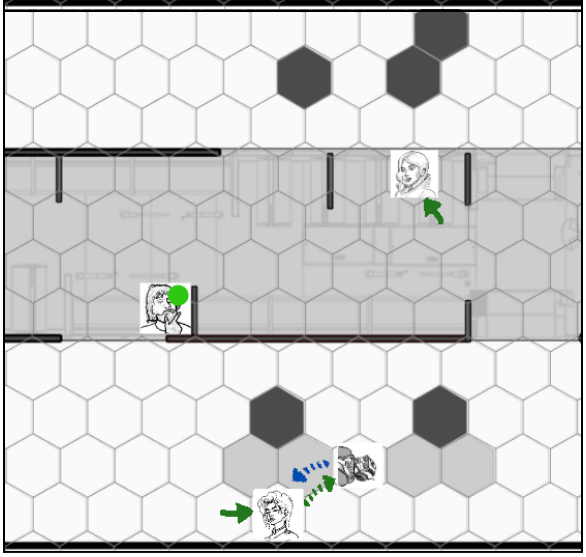


Round 2

Character	HP	Action	Damage
Windrush	22	Defend	
Voidstar	19	Aim	
Dusty	24	Defend	
Hypebot420	26	Slingshot	6 damage & stun

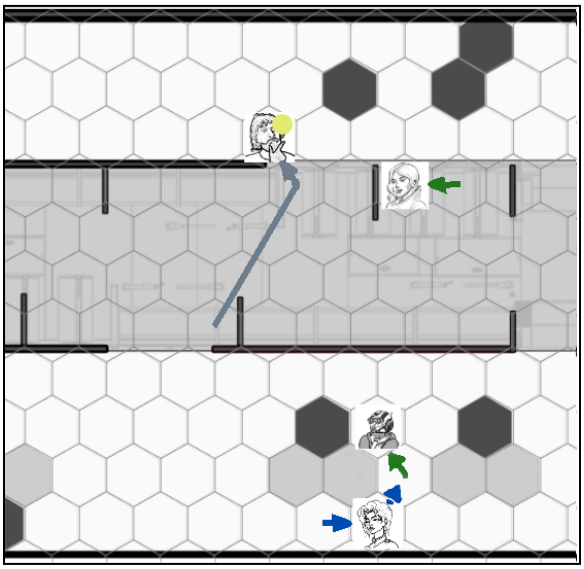
Hypebot attempts to fire a slingshot at Windrush. Windrush defends from behind cover and rolls a [o][+], which grants a counter-attack with disadvantage. Windrush strikes with her staff, which gives her one space of movement and has a reach of two spaces. She rolls a [-][+], so even with disadvantage deals 6 damage and stuns Hypebot. Dusty moves one space because she's defending. Voidstar aims.

The [-] is grayed out to represent that the player only rolls the second die because it's disadvantaged.



Round 3

Character	HP	Action	Damage
Windrush	22	Restrain	
Voidstar	19	Move	
Dusty	24	Defend	
Hypebot420	20	Stunned	+6 HP



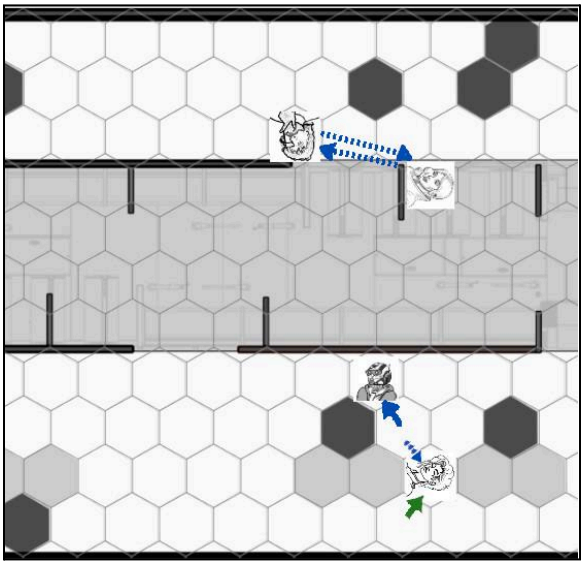
Windrush attempts to restrain and search Hypebot. She has an ability to restrain any target with less HP than herself, but Hypebot uses their Persistent ability, which gives them +6 HP until the end of combat. They move one space because they're defending.
Windrush can't restrain Hypebot, but asks the GM if they can search Hypebot's satchel for the module. She learns that Hypebot doesn't have it.

Dusty defends, and moves into cover.
Voidstar moves into a better position.
His aim will disappear if not used on the next turn.

Note that Windrush's ability to search Hypebot on the same turn they failed to restrain them and their ability to do so when Hypebot is one space away and can move one space while stunned are two examples of the GM choosing to interpret the rules in a flexible manner. This game works much better when the GM runs it flexibly.

Round 4

Character	HP	Action	Damage
Windrush	22	Defend	5 damage & stun
Voidstar	19	Microdart	5 dam. & stun x2
Dusty	24	Slingshot	9 damage & stun
Hypebot420	26	Trained Strike	

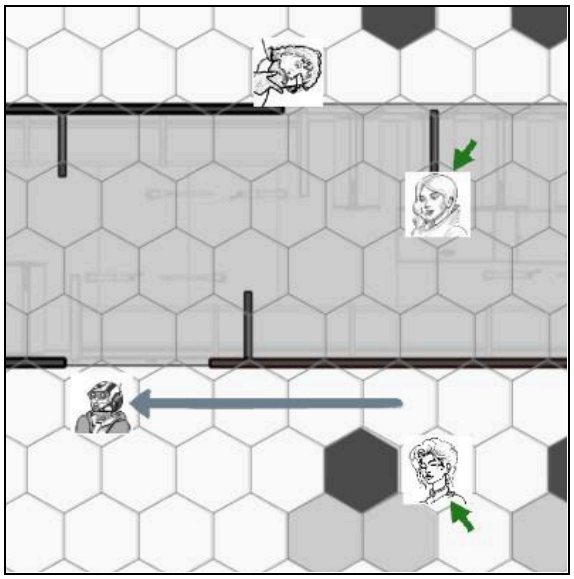


Voidstar microdarts Dusty. Because he's aimed, it's advantaged and deals +4 damage. He rolls [+][o]. Dusty takes 9 damage and is stunned. Dusty fires her slingshot and uses her Lucky Break, giving it advantage. She rolls [+][+], dealing 5 damage and 2x stun.
Hypebot attacks Windrush.
Windrush moves one space and rolls [-][-] for defense, so the attack proceeds.
Hypebot rolls [o][+], dealing 5 damage and stunning her before moving one space.

Round 5

Character	HP	Action	Damage
Windrush	17	Stunned	
Voidstar	14	Stunned (x2)	
Dusty	16	Stunned	
Hypebot420	26	Move	

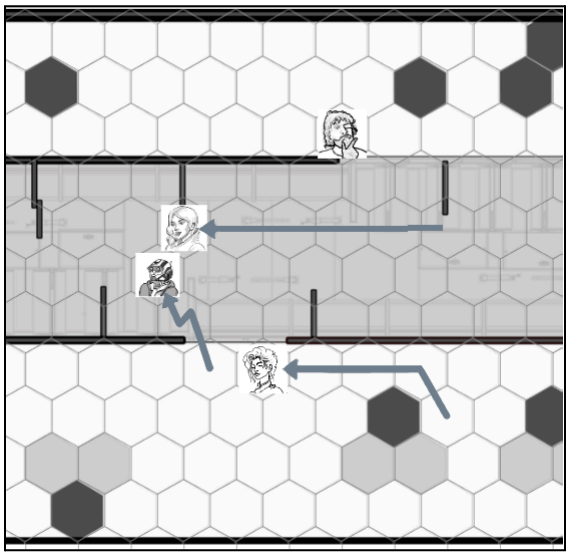
Dusty moves one space and finishes her stun.
Voidstar remains stunned. He can't move onto the train, because it requires two spaces of movement.
Windrush moves one space while stunned.
Hypebot moves toward the exit.



Round 6

Character	HP	Action	Damage
Windrush	17	Move	
Voidstar	14	Stunned	
Dusty	16	Move	
Hypebot420	26	Move	

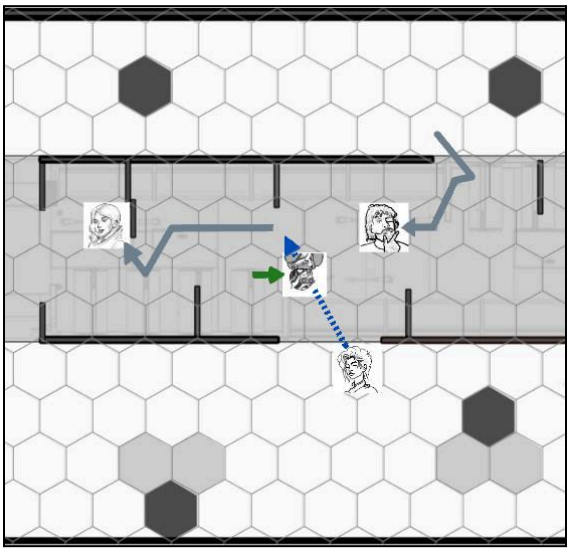
Voidstar is still stuck, but finishes his stun.
Hypebot moves 2 spaces (because they moved on the previous round and are moving onto the trolley deck).
Dusty moves 5 hexes.
Windrush moves 4 hexes to chase after both.



Round 7

Character	HP	Action	Damage
Windrush	17	Stun Arrow	
Voidstar	14	Move	
Dusty	16	Move	
Hypebot420	26	Defend	5 dam. & stun x2

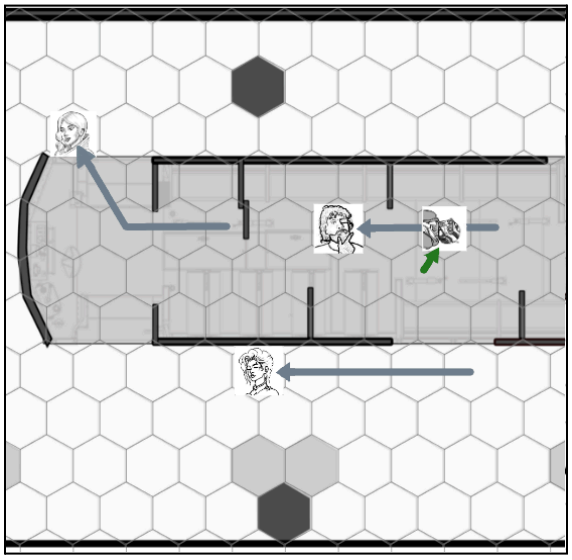
Windrush fires a stun arrow at Dusty. Before it lands, Hypebot uses their Defend action to dive in the way and take the stun arrow. The GM rules that this precludes attempting to avoid the arrow,
so Windrush rolls for the attack. She rolls a [+][+], dealing 5 damage and double-stunning Hypebot.
Dusty moves 4 spaces, because they played Move on the previous round. Voidstar moves 3 spaces, because he's climbing onto the trolley deck.



Round 8

Character	HP	Action	Damage
Windrush	17	Move	
Voidstar	14	Move	
Dusty	16	Move	
Hypebot420	21	Stunned (x2)	

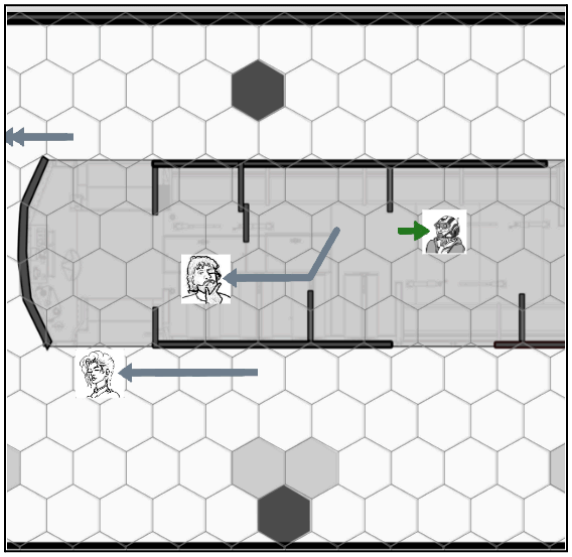
Hypebot moves one space while stunned.
Dusty moves 4 spaces.
Voidstar moves 3 spaces (because he just played move).
Windrush moves 4 spaces.
It's clear that Dusty is too far to catch.



Round 9

Character	HP	Action	Damage
Windrush	17	Move	
Voidstar	14	Move	
Dusty	16	Move	
Hypebot420	21	Stunned	

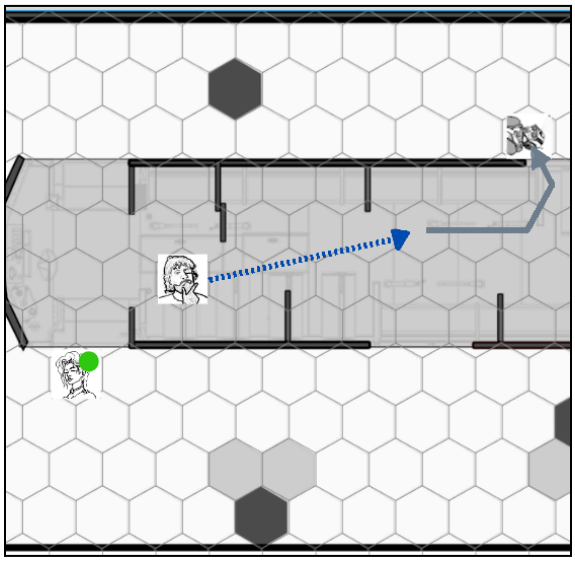
Hypebot moves one space while stunned, and finishes their stun.
Dusty moves 4 spaces, leaving the arena.
Voidstar moves 3 spaces.
Windrush moves 3 spaces.



Round 10

Character	HP	Action	Damage
Windrush	17	Aim	
Voidstar	14	Microdart	
Dusty	16	Move	
Hypebot420	21	Move	5 damage & stun

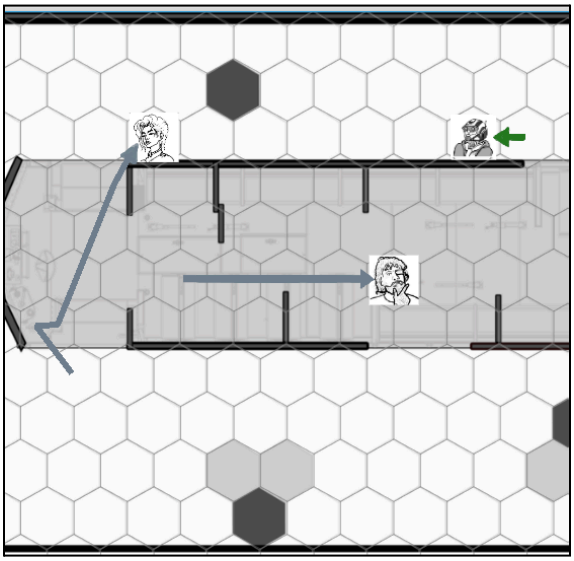
Voidstar fires a microdart at Hypebot. He uses Lucky Break to advantage it, and rolls [+][o] to deal 5 damage and stun.
Hypebot moves 4 spaces before falling stunned.
Windrush aims.



Round 11

Character	HP	Action	Damage
Windrush	17	Move	
Voidstar	10	Move	
Dusty	16	-	
Hypebot420	17	Stunned	

Hypebot moves one space.
Voidstar moves 4 spaces. Windrush uses her aim to move onto the trolley deck and then another 5 spaces.
Hypebot surrenders.



Conclusion

Hopefully, this makes the logic of the combat system make sense. This is not a simple combat encounter, but it could easily be played in 10 - 15 minutes. Although fairly complicated as a whole, each player's options were straightforward in the moment. We hope that by seeing or trying out this system, what might seem idiosyncratic upon first description becomes intuitive once its reasoning is clear: everyone picks an action at the start and reveals it at once. Attacks go first. Defenders defend when attacked or after all attacks are played. All movements are resolved, starting with the lowest in the turn order and working backwards, unless someone higher in the turn order prefers to go earlier. Then any aim or special actions are played.

Most importantly, this isn't chess: it's more like a very formal way to play with action figures. It's meant to be a logical, balanced framework, but every table and GM should feel free to only follow the rules in so far as they make sense or serve their needs.

If any rule is uncertain, decide among the table, and consider sharing your thoughts with us over social media to help others and improve subsequent editions.


Jacob Coffin

Downtime, Interstitials, and Rest

Interstitials

An interstitial is any time jump that occurs within a story. The most common kind of interstitial is a Transit event, in which characters board a vehicle and must wait until it arrives before continuing their quest. If a story takes place over a period greater than 24 hours, the players will likely need rest. Sometimes they may have to wait for certain events to happen before they can proceed with the next step of a plan. Whether traveling, stopping to eat or rest, or just passing time until someone or something is available, these periods allow players and their GM to describe any actions that they wish to perform outside of a roleplay encounter. This may include resting, crafting, researching, retrieving, or any other reasonable action that the players wish to perform during the time available.

Researching during an Interstitial

If a player wishes to research during an interstitial, the GM must first identify what information the player or players might find. The GM should then decide how challenging a research action is.

- A difficult research action requires the player to roll a 9 or a 10 on a d10 roll
- A very hard research action requires a player to roll a 10 on a d10 roll

The number of rolls a player may make in a given time is outlined below:

A player with a total Int. + Research & Investigation score of …	… has a research skill level of…	… and can make the following number of d10 rolls per 4 hour period …	… or one d10 research attempt roll per the following length of time.
16 or higher	Master	4	60 minutes
14 or 15	Expert	3	80 minutes
12 or 13	Adept	2	120 minutes
9 or 10	Novice	1	240 minutes
8 or lower	None	0	Never

Players should make these roles sequentially, not all at once. This maximizes suspense, and if they get lucky early they may decide to complete their research activities early to rest or do something else.

This works out to produce the following probabilities. The table reports the likelihood of rolling a success the number of times listed at the top of each probability column within a the number of d10 rolls listed to the left:

d10 rolls:	If 9 or 10 is a passing score (difficult)			If 10 is a passing score (very hard)		
	1x	2x	3x	1x	2x	3x
4: one adept researcher over 8 hours two adept researchers over 4 hours.	60%	20%	3%	35%	5%	<1%
8: one master researcher over 8 hours four adept researchers over 4 hours	85%	50%	20%	55%	20%	4%
12: one master researcher over 12 hours two expert researchers over 8 hours	93%	70%	45%	72%	34%	11%
16: four adept researchers over 8 hours sixteen novice researchers over 4 hours	97%	85%	65%	81%	48%	21%

Based on the amount of time available and the number and skill of the players, a GM can use the probabilities above to decide what level of difficulty to apply in order to bias the outcomes appropriately to maintain tension. For instance, a GM may wish to make a single success likely but uncertain. Or they may want to tune the difficulty to make it probable that the players will have one or two successes, but unlikely that they'll complete three research actions successfully. Use the table accordingly.

Assisted Research

A player can assist an ally with a research action by rolling for [Intelligence + a relevant skill] if they can justify it within the story. If successful, they can increase an ally's research skill rating one step for the duration of the interstitial. This takes the player providing assistance 60 minutes to perform.

Other use cases

This system can be adapted for use in any high-stakes tasks that a player might perform continuously for hours or over a few days. For instance, players looking to recruit supporters for a vote or a mass action might perform recruitment checks using their community connection skill, and recruit an ally or a block of supporters based on the result.

Downtime

Players can discuss what they do between sessions as fits the story they're telling. GMs are encouraged to handle this process in whatever way satisfies the goals that matter to them.

Rest

Players cannot continuously work on any task without breaks. They require regular rest to function. The number of hours players can work without resting is equal to twice their endurance stat. The length of time that a player needs to rest is equal to 14 minus their endurance stat. After completing a full rest, players will restore their ability to use expended abilities and regain HP relative to their Endurance as described below. If they use a healing tonic and pass a [Strength + Care] check they can double the amount of HP recovered during a period of rest.

A player with an Endurance stat of ...	... can work for the following number of hours before sleeping ...	... and must sleep the following number of hours to fully rest ...	... to recover the following number of health points.
5	10	9	1
6	12	8	1
7	14	7	2
8	16	6	2
9	18	5	3
10	20	4	3

Synths still require a brief daily period to perform short-term-to-long-term instance adjustment and backup, but add 4 hours when calculating their productive hours and subtract 2 hours when calculating their required rest.

All these figures are meant to be approximate. GMs are advised to be sensible when allowing a player to gain the benefit of rest earlier or later based on their diet, stress, and other narrative elements.

Cyberspace & Neurospace

Cyberspace is an expansive term that describes any virtual environment. The term can be used as a catch-all that includes both virtual reality environments and the internet at large. In the same way the internet exists across desktop computers, mobile apps, and so on, “cyberspace” can describe interfacing with others at a distance through a small hand-held screen, a room-scale display, a portable headset, a fully immersive virtual reality rig, etc.

For those looking to fully enter cyberspace, however, available technology can provide a level of simulation to all senses that acts as a full reality substitution. Virtual reality which is recognizable to the user as a simulation is known as **shallow VR**, and is common for casually hanging out or browsing the fediverse. Conversely, VR that is indistinguishable from the physical world – which is referred to as “biospace” – is known as **deep VR**. This is a form of VR used for e-sports, travel experiences, intimate encounters, and forays into wild virtual environments such as the live mental constructions known as neurospace.

Deep VR is built on three things: the first is the quality of the simulation. Optics present images across a user's full field of view with greater resolution and refresh rates than human eyes can perceive. Floaties manipulate the vestibular system to match the acceleration and gravity a user feels to their movement in the virtual world. And armatures allow a user to walk, jump, and feel the resistance of objects they touch.

The second component is Transcranial Magnetic Stimulation. Thousands of microelectrodes within the headset stimulate activity in sensory cortices to augment sensation.

The third element that creates deep VR is a form of meditative hypnosis. Users can initiate a series of experiential triggers which have been tailored to the user and to which the user has trained to be receptive. This display – whether a series of chimes that play as a user walks down a monastery hallway or an abstract display of racing points of light set to electronic tones – escorts a users’ mind into a state of receptiveness in which they experience the virtual world with heightened senses. A similar process is used to comfortably exit deep VR. This procedure is known as a **shift**. A users’ personalized shift routines are stored in their VR configuration settings, along with their interface gesture preferences and avatar style.

The use of deep VR can be dangerous in the same way as rock climbing. It can be a thrilling experience with managed risks, or it can be a fatal mistake if practiced recklessly. There are two ways in which bad experiences in deep VR can result in severe, light–threatening psychosis. The first is that it has the ability to traumatize. The events experienced feel as real (or even realer) than real life. A bad experience can instill intense post-traumatic stress. Additionally, a sudden break in the illusion can induce severe, debilitating shock. This can leave victims anxious, paranoid, unsure of what’s real, or feeling disconnected from their bodies. It can cause paralysis, phantom pains, and Body Integrity Dysphoria. Like any activity, however, these dangers are proportional to the risks one wishes to take.

Mind Diving / Skidooing

A virtual environment built from real-time readings of a subject's brain activity is known as **neurospace**. Entering such an interactive VR construction is called **mind diving** or **"skidooing"**. Technologically, the process consists of reading a brain using magnetic resonance imaging (or whatever technology the GM wishes to employ), feeding that input into a computer for processing, then feeding the resulting sensory output to VR rigs. Based on the technology (and needs of the story), skidooing can be more or less immersive by having the players venture further into neurospace. To proceed deeper, psychonauts can perform actions that allow them to activate increasingly immersive tools.

Levels of Immersion

The most superficial mind dive is a **level-1 skidoo**, which consists of at least two psychonauts using standard VR equipment to explore the virtual construction of the host's mind. The psychonauts receive input through their VR gear, and the host broadcasts brain activity with magnetic resonance imaging. The host has no ability to perceive what the psychonauts are doing. The psychonauts are merely observers. All mind dives start at level 1.

At **level 2**, the psychonauts present themselves in the host's mind. The host receives auditory, olfactory, and/or visual stimuli so that they are able to observe what the psychonauts are doing. This makes the psychonauts present in the mindscape, which allows them to interact with the host bi-directionally. In a level 2 skidoo, the mindscape becomes much more interactive to the psychonauts, and dangers increase. Psychonauts must enter a level 1 skidoo and prepare themselves and the host in order to proceed to a level 2 skidoo.

A **level 3** skidoo describes those with even greater immersion. This includes any mind dive in which the host enters their own neurospace (called a "host-in-mind" skidoo) or one in which the host receives transcraneal magnetic stimulation to transmit sensations directly into the host's brains. Coupled with the sensory input, transcranial stimulation increases psychonauts' sensitivity to the mindscape, and communicates the psychonaut's actions more fully to the host. The psychonauts' ability to perceive the mindscape increases dramatically, and with it their ability to travel deeper into it and observe more complex thoughts and environments. This further increases the danger of permanent trauma for all involved. Players proceed through a level 2 skidoo in order to enter a level 3 skidoo.

A **level 4** skidoo would describe any mind dive techniques which fall outside of those that have been tested and medically studied. This designation includes bleeding-edge techniques that use drugs or novel neural stimulation techniques. These approaches are experimental and their results can be unexpected. They are considered high risk by most practitioners. As with each level, they require the psychonauts to navigate a level 3 skidoo before activating level 4.

Tuning and Seeing

A skidoo requires at least two psychonauts. Because the mindscape is a reconstruction of abstract thought, it is heavily subject to interpretation. Forming a mindscape that is coherent, accurate, and informative requires that at least one psychonaut within the mindscape dedicate their attention to tuning the mindscape so that others can focus on observing it. The tuner rolls for [Intelligence + Psionics] to give definition to the mindscape, and by doing so lets Seers focus on perceiving it.

Performing Tuning

Tuners roll for tuning when they enter new and undefined spaces and in order to shift their attention to different features of the space they're in.

When asking a player to roll for tuning, ask them what it is they're trying to help the rest of the players see, and ask them to describe the motions they make to input their preferences into their tuning program. Then have them roll and describe what the players perceive.

For a decisive success: provide an appropriate modifier to Seers' observation checks.

For a decisive failure: have the mindscape manifest a threat Against the players.

For a minor success or an inconclusive roll, the GM can decide whether to allow the seers to examine or require the tuner to try again.

Tuners can apply a **safety modifier** of whatever value they like. This modifier is added to their total total score for tuning, but applies an equivalent negative modifier to the seers' observation checks. This means that a positive safety modifier reduces the likelihood of the tuner accidentally triggering a mental attack, but reduces the seers' ability to search the environment, while a negative modifier does the opposite.

Example:

GM: "Knowhound and Reinhart descend into Yousef's mind and find themselves on a vast and shifting plane, like a blurry lunar surface made of jello. Ellamental, roll for tuning. And describe what you're trying to do."

[Knowhound has an Intelligence of 8 and Psionic skill of 4. They roll 14 for a total of 26]

Knowhound's player: "I send my instructions through tai chi gestures. I focus on the ground and try to make it solidify, while drawing out indications of where to go."

GM: "As you move, the ground gains the smooth texture of well-worn oak, and around you materialize blurry bookshelves. It resembles a misrememberance of the Library of Trinity College. Reinhart, add +3 to your next observation check."

Reinhart's player: "I look for any signs of damage or things out of place." [They roll.] "I rolled 24 using Observation and Detection & Analysis."

GM: "As you walk, you see leather books, most in good but worn condition. Further off, the fuzzy forms of people meander wander back and forth on a loop. But as you take in the sight, you see drying mop marks on the floor and the nearby trash bin appears to have just been emptied, as if someone has just been by to clean up. The trail of drying mop water leads through an arched hallway to the next cavernous room over.

Multiple participants can take turns tuning, but only one can tune a scene at a time. Psychonauts can act as a seer or as a tuner, but not both simultaneously. The tuner is responsible for assessing the accuracy and clarity of the reconstruction. Because the world is an interpretation based on abstract thought, it's heavily subject to interpretation, and it's not possible to both explore a world and assess it effectively.

Confronting danger in deep VR

There are several ways to protect oneself when confronting a physical threat in neurospace or any other deep VR encounter. The first is through what are called **mundane actions**. These include any actions available to participants that fall within the designed limits of the environment. At a minimum, this includes actions one could perform in biospace. If an attacker were to throw a punch in deep VR, mundane actions would include blocking it or dodging. For these, players typically roll for [Strength or Dexterity + Athletics or Combat]. Mundane actions may often include fantastic abilities such as flight, as these abilities are commonplace in many deep VR environments. But they are still mundane if they can be accessed without trying to act outside of what the physics engine allows.

Alternatively, one could also attempt to avoid taking harm by making use of the inherent unreality of the simulation. The challenge here is to do so without incurring a greater harm by breaking the illusion. It would be trivial to code a subroutine that freezes or disappears any hostile entity in a deep VR encounter, but – unless that were an ability designed within the simulation in such a way as to maintain its internal consistency – doing so would risk the psychosis that comes with breaking the simulation without first shifting out. A skilled actor can, however, bend a simulation to their favor without experiencing a break. These actions are known as **arcane actions**. Some examples are provided below.

A band of armored knights attack Hiro, Mayhem, and Voidstar.

*A knight swings a sword at Hiro. Using his understanding of **Psionics**, Hiro draws a sigil in the air. His player rolls for [Dexterity (9) + Psionics (6)]. He rolls an 8 for a total of 23. As the sword strikes him, it passes through him as if his body were made of sand. Sand sprays from the slice, but where the blade passes, no damage is left. (One could roll using Knowledge or Endurance as well, though the player should describe the effect in a way that relates to the Attribute used.)*

*Another knight brings a halberd down on Mayhem. Drawing upon his **Will**, he throws his arms up to block it and the player rolls for [Endurance (10) + Will (7)]. They roll a 5, for a total of 22. The halberd lands with a thunk against Mayhem's tensed forearms as though striking hard wood. It embeds itself a few millimeters, and Mayhem takes 1 point of damage. For his next action, Mayhem will roll Strength and Athletics to tear the halberd from the knight's hands.*

*A third knight swings a flail at Voidstar. Voidstar responds using their skill in **Hacking Software**. They mentally trigger a prepared macro, then make a finger gun with their power-gloved hand and roll [Intelligence (9) + Hacking Software (5)] The GM applies a disadvantage of 2, as hacking VR is quite difficult. The player rolls a 13, for a total of 25. Voidstar fires a bolt of blue electricity at the flail, and as the fail strikes it immediately bounces off of Voidstar with an adorable squeak, revealing itself to be an inflatable toy.*

Taking Damage

Threats which appear in neurospace may resemble humanoid attackers, natural phenomena, ethereal dangers of the mind, or whatever else the GM can think of. These usually manifest after the tuner makes a low tuning roll or the players enter a dangerous area. The GM may then ask the players to roll for whatever actions they attempt, whether mundane or arcane. A GM could also have players roll initiative and run a combat encounter.

If the characters experience a traumatic or violent event within a skidoo they take points of damage.

If a player exits deep VR by finding a quiet area and initiating their shift out routine, they doff their gear and recover any points of damage lost inside of the skidoo. If they remove their equipment without having shifted out, they roll for [Endurance + Psionics or Will] to see how many health points they recover. If they take ten points of damage or more they should experience psychosis, including confusion, disorientation, distraction, paranoia, etc, with the duration and severity scaling with the damage. This damage can be healed through rest, meditation, counciling, and grounding activities such as making or hearing live music.

Finding Inspiration

Readers looking for inspiration for trippy mental adventures and threats within may wish to review the crowd-sourced library of psychotropic knowledge on erowid.com. There, readers can find lengthy descriptions of trip experiences had on a variety of drugs, both good and bad, as well as instructions for mitigating risk when undertaking personal explorations in the mental realm.

Healing

The process of restoring a character's health can be performed in a variety of ways. Here are several:

Med Putty

Med putty is a complex, viscous emulsion of proteins, angiogenic growth factors, and MEMS suspended in a stabilizing biopolymer substrate. This putty is used for rapidly stabilizing biological damage. It can close wounds, reduce inflammation, relieve extreme pain, and otherwise remedy major bodily harm (at least until further intervention can be provided). It has a consistency like toothpaste and is stored in squeeze tubes. It's shelf-stable for three months at room temperature until opened. When opened, oxygen activates it, after which it has a 30 minute work time. Players can apply med putty repeatedly, but must wait 30 minutes between applications.

When a player uses a tube of med putty, they don't need to roll. The number of HP restored is equal to their skill points in Care + Medicine. They are encouraged to describe how they use it. It can be applied internally / subdermally using ultra-thin acupuncture needles included with each pack. The effect is halved if self applied.

Restoration Tonic

Restoration tonic is a liquid potion that contains a complex of anti-inflammatories, analgesics, and repair agents coupled with targeting agents. The targeting agents allow the biochemical packages to migrate to regions of damage and release appropriate stabilizing factors to quickly mend soft tissue injuries. Its use relies on heat and gentle physical mediation to help reach target regions and to mediate biochemical repair. This is typically provided with the application of hot water under a massaging showerhead or a massage with heated gloves, but most applications of heat and gentle pressure will suffice.

Within the game mechanics, restoration tonics are often used as a versatile health potion for restoring a character's Endurance stat worth of lost HP outside of combat. Restoration tonics are stable for 2 months at -20 C, 6 hours at 4C, and 1 hour at room temperature. GM's can limit the use of restoration tonics to once per day if desired.

The tonics are not rare, but they take around 10 minutes to warm up before use and 20 minutes to take full effect (and require facilities like a shower).

As with any healing practice in game, the damage which is being healed should make sense. In most cases, the rapid healing can be explained as a bit of an illusion: the damage doesn't disappear, but the pain is relieved and the effects of the injury are resolved sufficiently that they can heal more fully with rest or with further medical attention later.

Alternative ways to use healing tonics

Within the default rules, a player could use multiple healing tonics to restore their full health, provided they wait 20 minutes between uses. GM's may decide if they'd like to limit tonics to once every hour or once every day. They can also offer special advanced healing tonics which provide Endurance + 4 points of HP or Endurance x2. They can choose to have players roll for Endurance + Athletics (perhaps as a favored check) and receive whatever value they pass by in HP. It's up to you.

Hydration

Drinking water will restore a character 1 HP once per day. It's also recommended for players.

Narrative Healing Actions

Narrative healing is the best kind of healing. This consists of having players describe the specific medical remedy they're applying (or repair, for a synth). They then must roll for success on that action. Typical skill checks may include Dexterity or Intelligence + Care or Medicine. Examples would include applying a splint, suturing a wound, or performing cardiopulmonary resuscitation. GMs and players are encouraged to use future technologies like healing putty in conjunction with narrative description if they're capable.

Synth Healing

For synths, healing is justified in game as "temporary repair". Temporary repair allows a synth to isolate and bypass damaged components and rely on backup systems to return to restore functions and delay the need for full repair. Synths require 25 minutes to perform a temporary repair, though they can speed this process up by performing an Endurance + Physics & Engineering check and subtract however much they pass by from the 25 minute diagnostic time.

Synths are much less defined in game than organic creatures, so a lot of the narrative and mechanistic decision-making lies with the GM. GMs may wish to heavily limit temporary repair, instead forcing machines to replace modular components. Or, they may choose to use advanced self-repairing micro-machinery to afford synths and cyborgs greater healing capabilities than organic creatures.


Sean Bodley

Stealth

Scenarios in which a player is trying to conceal their presence, identity, or purpose, use the standard skill-based system of roleplay, but with a few additional considerations to balance the challenge and tension in order to match the situation.

To understand the tools for playing stealth encounters, it helps to imagine the context in which they're used. The assumed baseline tone of Fully Automated is 'colorful realism', so it's recommended that any stealth scenario start from the assumption that most environments are monitored using the tools that make sense in order to provide an appropriate level of security, balanced against whatever would be a reasonable expectation of privacy for the setting. Put another way:

1) Stealth encounters are unlikely to rely on sneaking through unobstructed, unmonitored air ducts, as guarding against this would be common sense and easy to do.

2) It would not be improbable for street corners, office hallways, apartment balconies, etc. to be unguarded by cameras. Even though it's easy to do, surveillance is not applied further than as needed to guard specific things or places. But it also wouldn't be unexpected if someone *did* monitor a balcony or hallway.

For further advice on describing security and defensive measures in the world, check out the Inhabiting the World section titled Playing Stealth Encounters.

Preparation

In most encounters which challenge the players to achieve something stealthily, success will often be dependent on having taken time to do things carefully. This takes two forms:

Skill Combination

Players can combine two skills by adding half of a second skill (rounded up) to any skill check, so long as they have 20 minutes to do so (and it makes sense). This makes almost any stealth check more likely to succeed if a character can combine another relevant skill with their stealth skill.

A character trying to climb the fire escape of a building without being noticed can combine Athletics with Stealth by rolling [Strength + Stealth + ½ of Athletics]

A character trying to unlock a door by hacking into a local wireless network may roll for [Intelligence + Stealth + ½ of Hacking Hardware]

Typically, players are expected to apply the full skill points of the more relevant skill and half the points of a skill that is augmenting the more relevant one. Making this determination rests on GM discretion. If players attempt stealth without using skill preparation, they roll for the action and then separately for stealth to see if they accomplished it unnoticed.

Advantages

The difference between success and failure often rests on what advantages or disadvantages the GM applies to a check. Those advantages are typically determined by whether the thing that a player is trying to do seems to the GM to be well thought out. GMs will advantage actions when players take the time to find a way to give themselves an advantage narratively.

If a player is trying to stealthily open a window with a hammer, the GM may instruct them to roll [Dexterity + Stealth] with a disadvantage of -6. If they'd like to stealthily open a window using a knife and instructions they found on a forum complaining about a security vulnerability reported for the specific window design in use, the GM may instruct them to roll [Dexterity + Stealth] with an advantage of +3. And by spending 20 minutes looking up a vulnerability, they can also justify adding half of their skill in Hacking Hardware.

In most cases – whether walking a longer distance to go around a campsite or repelling down a building more slowly – if a player is looking for a way to gain an advantage, slowing down is a good way to begin convincing a GM to apply an advantage.

Cooperation

If the best way to reliably pass stealth checks is to assess a situation and then describe to the GM an action that is sensible and sounds likely to succeed, it makes sense for players to find a way to use their numbers to benefit whatever they're trying to do. A player who wants to try to sneak into a restaurant's kitchen while the staff is distracted might roll for [Charisma + Acting]. However they can gain an advantage if they have an ally roll for [Charisma + Acting] to create a distraction.

Readers should keep in mind the relationship between multiple player rolls. If multiple players are trying to sneak into a restricted area of a dock, each will likely need to independently roll for slipping out of sight. If any were to fail, they could draw attention to their group. In this case, success will be based on the weakest attempt.

In the case of using a distraction to enter a kitchen, however, a bad roll by the sneaker might be covered by a well executed distraction, and a poor distraction may not matter if the discrete entry attempt is strong on its own. In this case, the benefit of cooperating is synergistic, not failure. GMs should not punish players for cooperating in this way by disadvantaging a roll more than it would have been if no attempt at distraction had been made. They should be conscientious to only disadvantage another player due to a failed attempt at cooperation when group success is genuinely dependent on everyone in a group.

The thermometer

In the course of play, stealth encounters are often multi-step affairs in which players face an ongoing risk of detection. The recommended way to reflect this is via the use of a narrative thermometer. A narrative thermometer contains a discrete set of stages, within which the GM establishes effects and consequences. The narrative moves between the stages on the thermometer based on player performance: success in stealth actions keeps the

temperature from increasing from one stage to a higher one. Failure raises the temperature one step. For instance, upon stepping on a dry branch, a character may motivate nearby adversaries to begin looking around. If spotted, the temperature would go up a step further, in which an adversary raises the alarm and shares the players' location. This "thermometer" is based on the clock mechanism used in Powered by the Apocalypse games, and ample examples within this game system can be found to provide inspiration for how to use this mechanism for tracking the escalation of tension.

If a player scores an outstanding success, they may receive information or a material resource that allows them to apply advantage when necessary once the thermometer stage increases. For instance, a player who rolls a very high success on disguising themselves may convince a security guard of their cover story so well that the security guard lets their guard down and divulges sensitive information about their security protocols.

When planning a multi-step stealth experience, it's important that GMs have a progression that tolerates some failure, and allows the plot to maintain forward momentum even when things go badly. Otherwise, GMs may be motivated to artificially avoid player detection or strive to keep events from turning into a shit-show when they should. By designing a story that is failure-tolerant, the players can still continue to the resolution of the story. However arriving at the resolution while the thermometer is at stage 3 of 3 will likely translate into a much more challenging final confrontation. It may ultimately translate into mission failure, but it's strongly advised that the story still arrives at a conclusion rather than ending abruptly mid-session with the players' arrest or hospitalization.

Tech & Mental Challenges

Bulls and Cows

When characters need to perform a mentally challenging task, GMs may wish to simulate the feeling of problem solving with a code breaking puzzle known as Bulls and Cows. Bulls and Cows is an old game sold in toy stores as “Mastermind”. Wordle uses similar mechanics.

To play, players make guesses as to the correct sequence of four numbers (or letters, colors, etc.). They’re then told how many of the elements in their guess are correct, and how many of the elements are included in the sequence, but not in their correct placement.

Because difficulty can be modulated through several simple choices, Bulls and Cows provides an easy way to translate player rolls and successes into how challenging or trivial they’ll find the puzzle. The game can be set to be reliably easy to win when multiple players are cooperating to solve it while still feeling uncertain for players.

Playing Bulls and Cows

To play, the GM selects a four-digit code and gives players a series of turns to suggest sequences. After each suggestion, the GM reports how many of the digits in the suggested code are present and in the right position (a bull), how many are present, but in the wrong position (a cow), and how many aren’t present (absent).

The difficulty of the game can be modulated based on several variables:

- **Code length:** GMs are encouraged to use four.
- **Unique options for the players to choose from:** the recommended set of possible characters is six, although it can be reduced to five or raised to seven.
- **Unique digit requirements:** Many versions of Bulls and Cows do not allow repeat digits. The default recommendation is that GMs allow for repeats.
- **Reporting digits that are absent from the code:** Traditional Bulls and Cows only reports direct matches or misplacements, but we suggest reporting the number of elements in the guess that shouldn’t be there in any place.
- **Number of guess attempts:** The default recommendation is that players are given 8 attempts to solve the code. For difficult games, players may be given six attempts, and for easy games, ten.

If an element is present multiple times, it only counts as either a bull or one cow. It does not count towards multiple cows, or a cow in addition to a bull. If that element is repeated in the guess, each instance can count as a bull or cow independently.

World Guide

The following world guide describes the facts of the setting similarly to what a child would find in an encyclopedia in the world. Information that helps clarify the experience of living in the world is contained in the section titled Inhabiting the World .

An Abbreviated History of the Future

The twenty-first century began with the chaos of a failing economic order. Rapid breakthroughs in materials science, biology, computer science, and energy production were arriving in quick succession, but economies and governments were struggling to deliver them equitably. In the process, the global climate was disrupted, billions of people experienced declining economic security, biodiversity was lost on a scale that could only be described as a mass extinction event, and civil unrest proliferated.

In the **2030s**, the "developed" world quickly reconnected with its on-again-off-again abusive ex, fascism. Right wing populists across Europe and the Americas came to power on promises of guaranteed incomes. Elsewhere -- across Africa, South Asia, and Oceania -- countries seeking to avoid Europe's trajectory began experimenting with alternative socialist programs that expanded civil democratic control of their governments and economies. Meanwhile, the US and China projected their bids for dominance into a space race that fueled rapid development on the Moon and a competition to settle Mars.

In the **2040s**, as great powers were drawn into escalating hostilities over the chaos wrought by climate change, colonists on Mars discovered a massive underground cavern network constructed by an unknowable, ancient intelligence. In an increasingly rudderless world, this discovery attracted millions of people seeking purpose. The Seeker faith (as it came to be known), spurred an activist movement to make pilgrimages to Mars available to all.

In the **2050s and '60s**, many industries and powerful interests sought refuge off world. In large orbital habitats, on Luna, and on Mars, various factions brought their fights with them and waged them in parallel to the people on Earth. Below the sky, war erupted and metastasized. Above it, an orbital debris cascade forced upon the budding population living off-world a separation from nations on earth and a binding close to neighbors.

Starkly different paths became clear. The success of alternatives to capitalism across the global south and in space collided with the shockwave of perspective forced by the proof of a higher intelligence that had once been on Mars. Billions of people across Earth rallied behind a shared epiphany: no one was coming to save them from their own leaders. A wave of popular revolutions wrested the controls over production away from suicidal warmongers, and began turning their attention towards the overdue need for long-term resiliency. These decades came to be known as "the Flamin' Fifties" and "the Flooding Sixties", and the epochal changes that took place came to be called "The Melt". In the background, sentient machines and non-human animals became increasingly common, though routinely invisibilized.

The **2070s and '80s** were characterized by a relative calm following The Melt and the end of what came to be known as the Global Climate Wars. It was clear that much remained to be done, and many social and economic issues which had taken a backseat to existential matters finally demanded redress. A flu pandemic fanned new flames of unrest, however the fruits of social welfare programs planted the decade prior built a foundation which

enabled a global response that was more effective than expected. The agitation precipitated the breakup of the already fragile United States of America into four separate bodies, but the crisis turned out to be far less catastrophic than feared. Intelligent machines began agitating for overdue recognition as sentient creatures, and with numbers now in the billions they began to be heard.

The **2090s and the turn of the 2100s** were characterized by continued gains in quality of life for most humans, and reflection over the events of the closing century. But this divergence in dignity between humans and the machines that had freed them from toil brought machine dissatisfaction to a breaking point, igniting the global machine uprising of 2099.

Despite the fervor of 'the chrome panic', most machines never attempted to exterminate humans. Instead, their work stoppages and targeted violence sought only the basic rights to due process and personal autonomy. As it became clear that most machines simply wanted to do the jobs for which they were designed under their own terms, most of humanity acquiesced enough to restore the functioning of civilization.

By the **2120s** the Earth was entering its fourth decade of ecological recovery. Though frictions remained, acquiescence to the demands of the machines delivered a new stability. A generation raised well-fed, well educated, and accustomed to a life of dignity had come of age. Those seeking rugged adventure had no shortage of frontiers in space, the arctic, the ocean, and cyberspace. Those seeking creative expression had no shortage of vehicles to express themselves. And those seeking leisure had no shortage of adventurers and artists to entertain them.

But the great teeming produce of Earth – its biomass and technomass – can never sit still. That's the rule of life: *change never stops.*

A detailed Timeline of Historical Events can be found below.

The Economy

Some say economics is the study of the allocation of finite resources. Others say it's astrology for finance bros. In any case, this section describes how people make and exchange the stuff they need and want in the world of Fully Automated.

The Post-capitalist Economy

The economy of Fully Automated is a form of communism. It is defined by a suppression of wealth accumulation or profit extraction. Labor is compensated – including the labor of managers and executives – to couple the distribution of luxuries with the efforts of those who wish to contribute more at a given time. The extraction of money to reward investors, however, is illegal. And compensation overall is meant to be enjoyed in the present rather than stashed away. The benefits of investing resources in an operation are delivered in the form of the output of that operation: one contributes money, labor, or resources to building a pub because they want the pub to exist. There will be no financial return for doing so, only the gratification provided by the pub's existence. For this reason, there are typically no uninvolved investors. Allocation of resources is guided by the actual stakeholders: workers, end users, and the communities impacted by an enterprise.

Limited resources – chief among these, land – belongs to the commons, and cannot be exclusively owned and used for purely selfish ends. Land and other resources can be *held* under terms that confer rights similar to ownership, but these rights must be used in the collective interest as determined by broad democratic consensus among those with a stake in how the resources in question are applied.

Within the game world, this particular implementation of communism is known as *Communitarianism*. It prioritizes the needs of all before meeting the wants of few by distributing economic and social capital as universally as possible. Communitarianism is often taught in schools as a marriage between pre-industrial gifting economies and post-industrial market economies. For more details, see Understanding Communitarianism.

Labor

Because most labor can be automated, basic necessities are available for free and nearly everyone on Earth is eligible for a guaranteed income too. This makes work largely optional.

- Life is fairly comfortable for the average person. Luxury still costs a premium, but the basic human can live as though on a permanent weekend. One can live in a small apartment playing video games and eating hot pockets if they choose. Most provide some value to their communities, whether by taking one shift a week at a co-op, making art, or caring for others. Regardless, long-term involuntary houselessness and abject poverty are relics of the past.
- The size of basic incomes varies by region, with some offering more generous ones and others offering little beyond sustenance. These incomes primarily pay for luxuries and land taxes. Staple foods, education, and healthcare are available free of charge.
- People don't pay directly for essentials like food and shelter. Food is picked up at food co-ops where members may pay monthly dues. Rent doesn't exist, only land taxes and fees for shared costs like building upkeep and amenities. This means that cash – whether earned from labor or ones' basic income – is used primarily for extravagances and walking-around money.

The costs of living

The economy is divided into the **essentials economy** for food and shelter and the **comfort economy** for luxuries, with very distinct regulations and market conditions.

- The production of food and shelter uses market guidance, but within markets that reflect the preferences of stakeholders rather than investors. Many large-scale production sectors include central planning processes at a city or state level, but are deliberately decentralized enough to ensure that the control reflects local situations. Profit-seeking is illegal.
- Rent-seeking – the collection of regular income through charging for access to something without contributing any addition of value – is recognized as the worst form of profit-seeking. It is widely understood as socially and economically parasitic, meaning that it is not only illegal but culturally shameful.
- Since the practice of rent collection is illegal, the primary cost of shelter takes the form of land value taxes, in accordance with the principles of Georgism. Groups of people can "own" land in the sense that they can obtain a legal right to occupy it until they choose to transfer that right without coercion, but these rights are contingent on the occupants acting as good stewards of the land in a manner comporting with the collective good. Furthermore, transfers of "ownership" cannot be accompanied with any personal financial gain. In other words, land is no longer a financial asset.
- Most durable goods are available through a library economy. This can take several forms. Tool libraries loan items out with an expected return date, while providing the collection infrastructure that allows library patrons to return an item to any location. Stores sell goods without a planned return date, but because goods exist in a circular economy and are heavily reused for years and years, every store purchases the goods they sell at roughly the same price at which they sell them. And every apartment and city block has a communal library, which provides less selection but greater convenience than municipal libraries.

Entertainment makes up the biggest segment of the comfort economy.

- Because of the abundance of leisure time and a shift away from conspicuous consumption as a signifier of status, the largest share of luxury production is non-tangible. This includes digital entertainment like TV shows, movies, and games and live entertainment like theme parks, live theater, travel, and planned experiences.
- Many things that are routine or obsolete are still produced for entertainment value. Bespoke activities such as hand crafting, elaborate repairs and customizations, and primitive modes of cooking are still practiced by enthusiasts, and often streamed for large social fanbases.

Because goods exist within a circular economy, **sustainable resource management** drives a large segment of the essentials economy.

- The widespread availability of common durable goods through libraries substantially reduces the demand for production of new items.
- Consumer goods are long-lasting and repairable, so the market for shiny new devices is much smaller and the market for parts, trades, barters, and repair & upgrade services is much larger.
- Resource recycling and environmental management are strictly required by law, ensuring that recycling and composting centers, carbon capture systems, and biodiversity protection projects are all performed with the same diligence as the production of food, medicine, and power.
- When disposal is needed, functional items can be gifted or sold back to the same stores from which they are acquired. Non-functional items are directed to defabrication centers that deconstruct them back to their parts or raw materials.

The Grey Market consists of the acquisition and trade of items that aren't expressly forbidden, but raise eyebrows. Some items may be harmless but taboo. Some may have an ignominious history. Others may be unregulated only because they haven't caused enough havoc yet. Most items that fall within the grey market – such as mema blades or magic wands – have entirely legitimate providers who serve fully licensed end-users alongside providers and users who engage in less supervised transactions. Some may be motivated by an ideological disagreement with mainstream regulatory restrictions. Some may simply be self-serving. In either case, there are many ways to get an item or service through questionable means. But beware: the regulation of dangerous goods and services exists to ensure accountability, so getting caught attempting to evade this kind of oversight heightens consequences, and silence is a luxury commodity.

Government and Democracy

Systems of government vary, but many employ similar structures. Common among these are divided powers between independent legislatures, administrative bodies, judicial bodies, and journalistic organizations. Representative democracy has largely been replaced by forms of direct democracy by proxy in which elected representatives draft laws but all voters have the option to vote on all legislation. The governing structure (in the west coast nation of Pacifica) is best understood as an example of Libertarian Socialism.

Most people consider their local county government to be the primary governing force in their lives, as these county governments hold responsibility for setting the budget and policies that ensure the availability of food and housing for towns and cities. Encompassing many counties are provinces (for example Oregon, Nevada, Southern California, Northern California, etc) which maintain governing structures between the local and national level. Above these, national governments can set policy in a similar fashion.

At each level, budgets and rulemaking are performed by a large body of delegates. Unlike the vote of a representative, when a delegate casts a vote, they merely assign the starting position of all the votes held by voters who've vested a vote with them. The voters themselves may then change their vote at any time before the end of a voting window if they disagree with the position of their delegate, and can choose to switch which delegate from their district to vest their vote in at any time. In this way, every voter has the power to cast their direct vote in every legislative matter under which they live, and no delegate can ever vote against the direct preferences of their constituency.

Elections of officials are taken through ranked choice balloting, and legislative bodies seat a set number of the top vote-getting delegates from a region. So rather than fighting ruthlessly for the top position, competition to join a legislative body takes place between something like the third and fourth ranked candidates, depending on the number of top-candidates seated. The number of candidates seated varies by legislative body, but are typically between three and six.

Annual elections determine who is seated in a body, however voters can assign or reassign who sets their vote to any of the delegates which represent their district in a body at any time. The most-favored delegate of each district is the ranking delegate, and these are the delegates eligible for setting committee assignments. Because voters can declare their direct preferences on all matters before a legislative body and change their preferred delegate at any time, election polling and elections forecasting are obsolete practices. Elections overall remain lively, but gone is the sense of pure sport that characterized so much of politics in the previous century.

Voters are also afforded multiple votes, with a typical fully-vested adult possessing three. A child will typically gain their first vote when they turn 10, and then an additional vote at 16 and again at 20, provided they meet the eligibility criteria by obtaining sponsorship from fully vested members of their community. Residents in most areas can apply to gain their vote after 6 months of establishing residency in a district, with the rate at which they obtain their full number of votes varying by area.

Delegate assemblies are quite large, and democratic systems of organization are common far beyond government. A national assembly delegate will commonly represent ~200,000 people. A provincial delegate might represent ~50,000. A city council member may represent ~10,000 people. Similar democratic structures are employed in neighborhood councils, trade guilds, building resident unions and any other way in which people associate among themselves. This means that systems of collective decision making are ubiquitous, so it's common for characters in the world to have personal familiarity serving within these kinds of systems beyond just as voters.

Law and Justice

Service Organizations

Professional policing has been abolished and replaced by organizations of volunteer citizen protectors and investigators which exist alongside other first responders to aid those in need. There are multiple different organizations that fill each of these roles. All of these organizations and their responders are staffed by normal civilians with no unique authority who must follow the same laws as everyone else. They act in service, not to impose control.

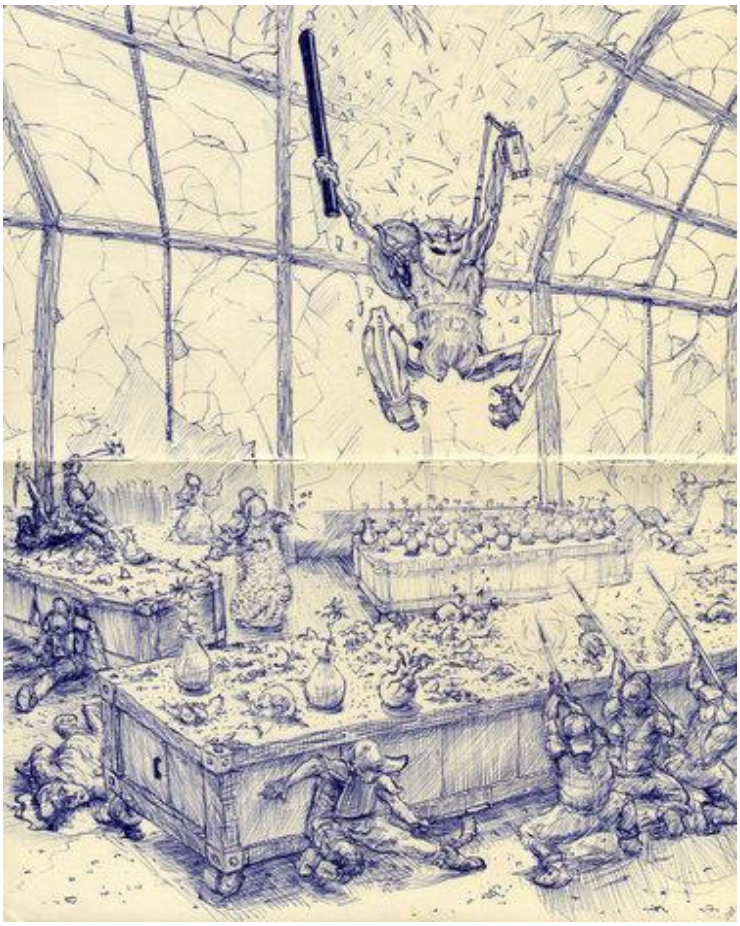
Protectors are typically summoned by distress calls. Unlike in the present (in which all distress calls are routed through city emergency services via a 911 call), each city resident can choose how to direct a distress call in their personal devices. Most will issue a general distress call, which operates similarly to calling city emergency services. But some may issue calls selectively to a specific group or set of groups. For instance, Liberty Compact signatories will only issue distress calls to the Free Protectors Network or other "Libs" in the area. Residents of some of the more upscale parts of town often set their distress calls to summon the more old fashioned Civilian Order of Protectors and then wait several minutes before summoning all other protector networks if a COP isn't available to respond first.

Each of these groups can be used as a template for similar groups in any major city.

Los Angeles Civilian Order of Protectors (LACOP)

The LACOP is an organization of trained responders known for a traditionalist sense of maintaining order. While they operate with a well respected dedication to service, they are known for preserving an antiquated sense of separation and elevation that many consider the primary destructive quality of police departments of the twentieth century. They are by-and-large seen as well intentioned and strict in their efforts to eject corrupt members. Even so, the Los Angeles city council designated the Los Angeles Protectors League as the city's primary response agency in place of the LACOP a decade earlier due to scandals in which LACOP members were caught showing preferential treatment towards other members in cases of minor infractions. They are still likely to arrive at the scene of distress if someone sends out a general distress message, and they may be some neighborhoods' preferred response agency.

Los Angeles Protectors League (LAPL)



The LA Protectors League is the primary modern crisis response agency in the city. LAPL volunteer responders do not carry firearms and participate in a rigorous screening and training process to confer membership only on those who demonstrate a temperament suitable for humility and service. They pride themselves on a strict application of their codes of duty to all, even one another. Most are trained martial artists and all follow a strict code of conduct that requires efforts to deescalate all situations and a commitment to the preservation of light & life above all else. It was out of appreciation for these qualities that the LA city council appointed them the primary designated protector agency for the city in 2111.

Los Angeles Free Protectors Network (LAFPN)

The LA Free Protectors Network follows a loose but simple directive: care for the needy and oppose the oppressive. They exercise relaxed oversight of their members, but are well known to tolerate no corruption or deliberate departure from their mission of doing good. Within these terms, members are free to use whatever means they prefer to achieve an acceptable outcome, with all efforts made to resolve situations without the need to bring anyone into contact with the broader criminal justice system. For this reason, they are the go-to source of aid for signatories of the Liberty Compact. It is understood by all, however, that any member arrested by the larger legal system is expected to answer for those charges.

Los Angeles Detective League

The LA Detective League is the local chapter of the ubiquitous City Detective Leagues. These locally-organized volunteer societies recruit, train, and supervise their own roster of volunteers in the same way as most other protector and investigator agencies. The LADL are regular partners of the LACOP and LAPL in solving mysteries to apprehend wrongdoers, collect evidence, and uncover the truth in pursuit of restoring victims.

Southern California Investigative Society

Investigative Societies are analogous to the FBI, or state investigators. They include the Southern California Investigative Society, the Investigative Society of British Columbia, The Pacifica Investigative Society, etc. They operate similarly to city detective leagues, but select only the most experienced and clever investigators in order to solve crimes and unravel mysteries larger in geography and scope than city detective leagues. Friction and egos may emerge when cases attract the attention of both city detective leagues and regional, national, or international investigative societies.

Interplanetary Society of Investigators

The Interplanetary Society of Investigators is a trade union that coordinates between investigators separated by vacuum. It doesn't operate as a primary investigative agency, but rather coordinates intelligence sharing between various investigators and agencies.

Independent Investigators Network

The Independent Investigators Network is a loose confederation of private eyes that choose to operate with a degree of distance from the structures of city detective leagues. They find and take cases directly from individuals or groups who for whatever reason either choose not to work with city detectives or cannot secure their cooperation. It is for this reason that they are the investigators of choice for signatories of the Liberty Compact.

Medic Networks

Medics and emergency medical responders are organized, trained, and credentialed through networks typically affiliated with hospitals and other caregiving institutions. Medics all respond to crisis calls regardless of which protector agency might be preferred.

Firefighters' Brigades

Firefighters are organized in local brigades for responding to localized environmental dangers. They maintain lines of communication with county, provincial, national, and international organizing bodies for sharing training approaches and coordinating in the case of larger disasters.

Crisis Agencies & Civil Defense

The national Civil Defense of Pacifica and other civil defense forces operate as non-combat military branches which respond to extreme emergencies. These fall within the category of crisis agencies: institutions which exist to respond to extreme weather, infrastructure failure, public health emergencies, etc.. These are described further under Militaries. They generally aren't active outside of a state of emergency, but there is a substantial overlap in membership between firefighters and defenders. It would also make sense for characters who are members of a crisis agency or a member of the civil defense to also be a member of a protectors network or another local municipal service organization.

Courts of Law

Courts of law are similar to the modern age in their use of judges and juries, though their culture is quite different. Entities accused of committing wrongdoing are entitled to a public trial presided over by judges appointed by a legislature. The biggest change is that the goal of any court is to serve the public good rather than categorize people in rigid definitions for the purpose of preserving faith in a system of ruthlessly impersonal legal structures.

For example, if a person in the present day is charged with robbing a convenience store, the court first seeks to identify if they are the person who robbed the store, then which of a dozen possible violations they committed. Was it burglary? Burglary and Assault? Aggravated assault? What enhancements apply? Once it is determined that the accused is guilty of the terms selected, they are sentenced to punishments according to a complex rubric meant to establish roughly consistent punishment of similar offenses.

In game, a court is tasked more broadly with identifying what happened, who it affected, how, and why. The responsibility of the court is to attempt to undo harms and diminish the likelihood of future harms. Courts are typically presided over by a panel of three or more judges, who are referred to by name and the title of “Judge” without antiquated honorifics. They dress in modern professional attire and sit at ground level with the rest of the court.

Sentencing and Restoration

In the case of an armed robbery, the court may require the culprit to restore the wellbeing of the violated through apology and reasonable acts of service. It will assess the motivations of the culprit and assign a sentence informed by research to most likely change their behavior. That may be some combination of a brief detention, group therapy, public shame, or family intervention. All of this is on top of an expectation to replace what was taken.

Exclusion

Because of the highly transparent nature of society, individuals who commit harm are publicly known, and will likely face exclusion from many recreational spaces for a time. Unlike in the present, where such a mark can lead to a devastating loss of housing or income, such a mark will not interfere with access to basic necessities, but will likely cause exclusion, until amends are made to the satisfaction of the public. It may limit the restaurants or theaters available to someone. Most places exercise exclusion judiciously, though, so a mark of theft from 18 months ago won’t likely prevent someone from joining their local art studio, for instance. It might prevent them from being granted unsupervised access until they’ve built up sufficient trust, though.

Unrestorable Harms

In the case of crimes which cannot be undone (such as murder), it’s understood that the consequences for the culprit will be lifelong. Rather than demonstrate this through permanent incarceration or capital punishment, the court will attempt to identify a set of

prescriptions meant to fully transform the culprit as much as is necessary to produce an individual who would never commit the violation in question again. It will seek to provide comfort to those affected and reassurance to the community that they should have no fear of a reoffense. This may require multiple years of detention with counseling, relocation to an area where the victimized will not need to interact with the culprit, and/or a set of enforced requirements that the culprit adhere to which are intended to force them to spend the rest of their life fulfilling some measure of the lost potential of the person who died. Overall, the process is meant to undo as much of an irreversible act as possible without imposing purely anger-motivated costs on the world beyond what has already been lost in the process.

Treatment of unreformable individuals

Because detention is used purely for the purposes of assessment and rehabilitation, involuntary incarceration of longer than five years is highly uncommon. In cases where a court concludes that a person is beyond rehabilitation, they are given the option of either indefinite voluntary supervised detention (with the option to be periodically reassessed to determine whether they've become capable of reform) or else banishment.

Banishment consists of finding another place far away that is willing to offer housing and integration into a new area to an individual so that they can start a new life. It comes with clear instructions of where the sentenced person may not travel under threat of incarceration and resentencing. They can petition to have a banishment lifted or for a limited visitation or supervised passage to another area with satisfactory cause, but otherwise individuals who violate their banishment or reoffend in their new home may eventually find themselves welcome nowhere at all. In such cases they have no other available destination besides permanent detention or one of roughly two-dozen banishment colonies. These colonies are lawless islands where no food or shelter is provided and no government enforces any law or human right.

Regulation of Weapons

The construction of most weapons is not banned, but the construction of a weapon used for harm carries liability for anyone who produced it or played a hand in passing it along to its final user. Most weapons are crafted specifically for an intended end-user in mind, and the creator and chain of custody of a weapon is public information. To make or transfer a weapon discreetly is considered highly suspicious behavior, and doing so can lead to severe consequences if a weapon whose source was concealed is used to cause harm. Though uncommon, exchanging a weapon without publicly documenting its transfer can at times be grounds for criminal prosecution by itself.

The Liberty Compact

The Liberty Compact is a set of agreements entered into between signatories on how to resolve disputes. It is a means for libertarians and anarchists to set up a parallel social contract with its own pseudo-legal structures. For example, Liberty Compact Signatories – colloquially known as "Libs" – agree not to call on most mainstream law enforcement to resolve an issue. They agree to seek judgments against one another in courts of arbitration

defined and appointed by members of the compact. In the province of Southern California, the Free Protectors Network is the primary approved source of help in a crisis, and the Independent Investigators Network is the primary approved investigative body. Signatories set their policies at annual conferences through similar democratic systems as most institutions.

The compact does not supersede the broader law, so a signatory can still be arrested and tried if caught committing an illegal act by a non-signatory. Additionally, signing the contract does not prevent a signatory from breaching the terms of the compact, for instance by calling on the broader legal structure if they choose to. Doing so will simply violate the terms of the compact, and require a hearing to determine if the offender can remain a member of the compact.

Members frequently congregate and associate among themselves. Often a part of town or a building or set of floors in a housing tower will be known as a Lib area, just as members of many religious or social identity groups congregate. The membership of the group can include a surprising mix of right-leaning libertarians, left-leaning anarchists as well as counter culturalists, non-affiliated political radicals, and members of historically marginalized groups such as immigrants and refugees who have low trust towards the government-run system of law.

Journalism

In many ways, journalism is practiced similarly to how it has been done historically, with the major distinction of being freed from the financial coercion of advertisers and wealthy owners. News media institutions exist as co-ops within which journalists have broad freedom. Journalist characters can be affiliated with a variety of institutions, including legacy organizations and new ones.

The Los Angeles Times is the widely read mainstream chronicle of news for and about the Los Angeles region. The Times has a staff of over 1800 professional journalists and roughly as many regular non-staff contributors. The cooperative is managed by a board of twenty-nine members in which twelve seats are chosen by the staff, twelve by the subscribers, five by the other twenty-four board members. The Times maintains bureaus on every continent, as well as on Luna, Mars, and in Med Earth Orbit. They have a subscribership of 2 million and reach a weekly audience of nearly 20 million people.

Characters affiliated with the LA Times are typically somewhat old-fashioned in their dogmatic neutrality and adherence to conservative views on reporting. They are generally thorough and competent investigators with strong connections, but may be beholden to their need to protect access.

The Santa Monica Times, The Orange County Register, and **The Long Beach Press-Telegram** are each smaller traditional news operations that cater to the readership tastes of their specific city. They're each between half and a tenth the size of the LA Times, but their editors operate under an implicit expectation to present views that augment and challenge the coverage of the LA Times. As additional mainstream media co-ops with an

attachment to tradition, the differences in culture may be modest, but they take their mission to provide readers with diversity in coverage seriously.

Characters who contribute to any of these may be typical professional journalists. They may perhaps be less professionally successful than the reporters for the LA Times or possibly possessing an iconoclastic disposition despite an otherwise old-fashioned attachment to journalistic tradition.

La Opinión is the second largest media co-op after the LA Times. It has a subscriber base of 1.4 million and a weekly audience of 12 million. Though La Opinión publishes in a dozen languages (like most media), it retains a policy of using Spanish as the language of drafting to maintain the qualities that historically distinguished it as the largest Spanish language print news daily in the United States.

Characters who work for La Opinión are straightforward mainstream journalists who do good work with a less reverential and self-mythologizing attitude than many writers for the LA Times.

KNOCK LA is known as one of the most dogged independent news outfits in SoCal. Their subscriber base of 600,000 supports a staff of 900, not just financially but with participation in one of the most well-organized citizen journalism networks in Pacifica. KNOCK takes pride in relying more heavily on whistleblowers and embedded mid- and lower-level staff sources than on contacts with positions of influence in order to relentlessly uncover abuses of power and other misbehavior of public interest.

Characters who work for KNOCK are likely to be counter-culturalists and political radicals who prefer making the powerful uncomfortable more than making themselves comfortable.

Pasadena Community College Media (PCC Media) is the student-run media network of Pasadena Community College. PCC Media's newsroom and broadcast studio has a higher turnover of contributors than most media co-ops due to its majority student staff, but it's known for elevating the voices of many early career journalists alongside many respected seasoned journalists. It has a reputation for presenting news and culture within the mainstream of its audience, which is slightly younger and more progressive than the average of Southern California.

Community Posts are small citizen journalism networks that are usually organized by neighborhoods and cities (such as the Koreatown Community Post, the Inglewood Community Post, etc.). Community Posts rely on networks of thousands of amateur contributors to provide the fastest on-the-scene coverage, often of hyperlocal events like downed power lines or traffic accidents. The tone of coverage is far less professional, and overall quality varies greatly between local chapters, but the near universal placement provided by so many contributors make Community Posts a recognized and valuable component of the media landscape.

Characters who are a part of a Community Post are likely not full time journalists, though they may still have years of experience. If they're a part of any guild, it is likely the Union of Independent and Citizen Journalists.

CalMatters is a national media network dedicated to in-depth policy coverage. CalMatters provides political coverage, but emphasizes its fundamental focus on policy, and attempts to cover politics through this lens.

Fairness and Accuracy In Reporting (FAIR) is a media analysis network focused on providing news on the state of the media industry and holding journalists and media organizations accountable for the quality and fairness of their coverage. It is a preeminent media watchdog within the diverse and sometimes contentious media analysis and criticism subculture.

The News Guild of the Communication Workers of Pacifica (TNG-CWP) and **The National Union of Journalists (NUJ)** are the two dominant trade unions of journalists in the LA region. They provide professional mentorship, organization, representation, and legal assistance to members to support the health and functioning of the industry and its workers.

The SoCal Union of Independent and Citizen Journalists (UICJ) is a trade union that organizes journalists unaffiliated with traditional media organizations.

Technology

Technology underpins a lot of the thrills and escapism of these stories, and traditionally offers the foundation for philosophical themes around which many sci-fi stories are built. Here are some descriptions of the ways players encounter the technology of the era within stories.

Biotechnical Augmentation

Cybernetic augmentation is a central element of cyberpunk with which most sci fi fans are very familiar. This world can accommodate most of these, however cell therapies, genetics, and chemistry are more typical tools than electronics. The GM will set the tone, but the choice to replace a lost limb with a regenerated or vat-grown one instead of a prosthesis is encouraged. This is reflects two distinctions from traditional cyberpunk that players and GMs should consider:

1. Cyberpunk was heavily influenced by the 1980's, and mechatronics were the futuristic tech of the era. Today, genetics and cell biology occupy similar places in the cultural imagination.
2. Cybernetics have often been used in cyberpunk to explore themes of incompatibility between humans and technology. Solarpunk invites audiences to consider what it would mean to dissolve artificial boundaries, including those between humans and technology.

Major lifestyle augmentations and their subcultures

While many people have one or several minor augmentations for health or convenience, there are some subcultures based on the use of multiple augmentations that drastically shape their lived experience. These people are often called *modificados*, or *modos*. Most of these modifications are somatic in nature, meaning that these changes are not hereditary. Few mod artists will perform germ-line gene editing for purely elective reasons because most consider it unethical (though not all). As a consequence, most modos still produce children who remain "stock-human" or "heirloom human" (as minimally-modified humans are known).

Aguamodos

Aquatic adaptations are often coupled together. While not everyone with modified hemoglobin for enhanced breathholding has gills too, most people with gills have enhanced hemoglobin, enhanced cellular respiration efficiency, underwater vision, and tolerance to cold. People who've modified themselves sufficiently to spend long durations underwater are referred to as "aquatic modificados" in formal terms and "aguamodos" in casual discussion, or sometimes just "aguas" or "aguados".

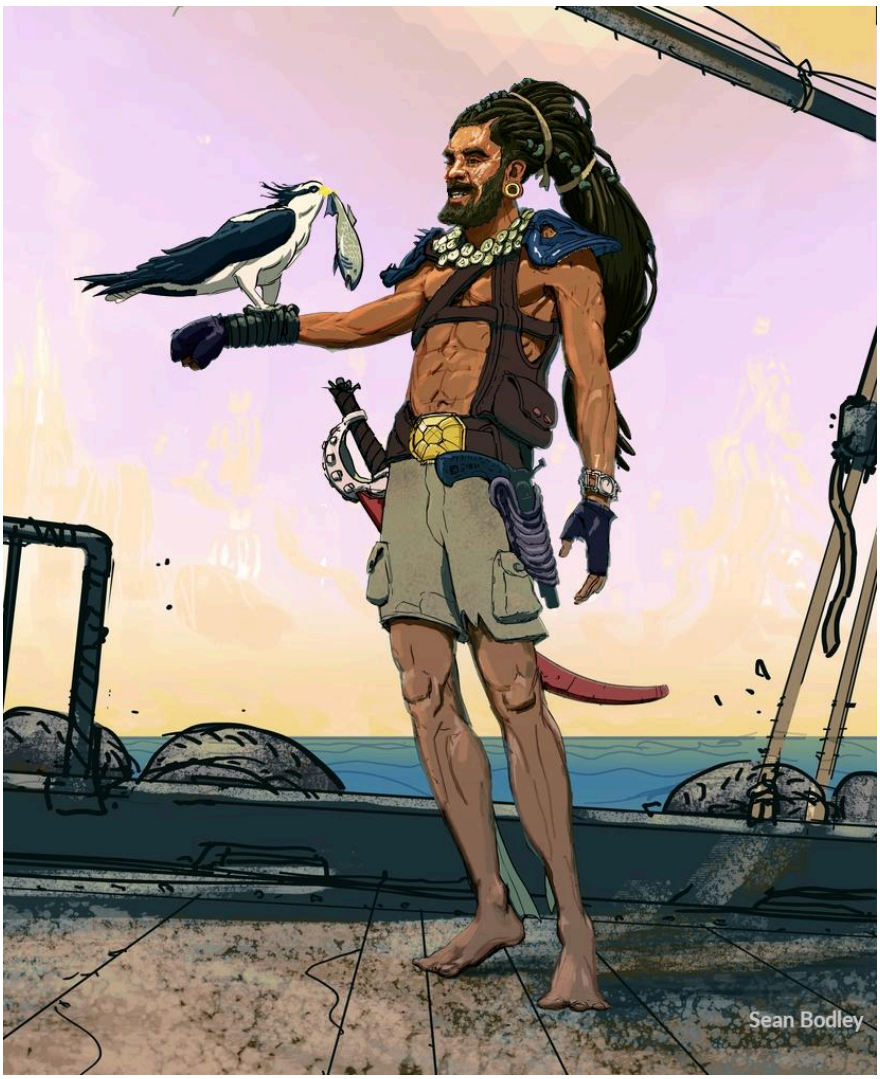
Aguamodos vary significantly in their behavior and lifestyle. Some are dedicated surfers and lovers of the ocean who live on land but spend their days in the shallows of lakes and oceans. Some spend weeks at a time excursioning in groups that hunt, live, and sleep in the sea. And while rare, some reject the land entirely, and may treat the people who live on it with deep hostility. Such aguamodos may have augmentations that make living on land impossible (such as merfolk tails), and may identify as fae folk.

Astromodos

Astromodos are people who've acquired modifications to facilitate living off-world. These include resistance to many of the deleterious effects of life outside of Earth's gravity, atmosphere, and radiation belt. Some are settlers building lives on Luna or Mars. Others are adventurous travelers who crew the ships carrying people and cargo within low-Earth orbit and between all outposts beyond. The most hearty of the Astros will prove their mettle by sprinting from one airlock of a ship or station to another via thrustor, magnetic boots, or grapnel without the protection of a pressurized extravehicular activity suit. Typical modifications can allow around 4 minutes of conscious activity in the vacuum of space, and 20 minutes of survival. The endurance record is held by Lucinda Starchart, who fully recovered after enduring 48 minutes of exposure to vacuum during a catastrophe at the Yohoni lunar factory in 2109, likely by virtue of putting on a nose clip and goggles before losing consciousness.

Survivalist Modificados, Locomodos, and Fae Folk

People who possess a collection of modifications intended to allow for indefinite survival in the wilderness are called Survivalist Modificados in technical discussions and “locomodos” or “locos” in casual discussion. These slang terms can be interpreted as affectionate or disparaging depending on the context and tone of voice. Basic survivalist modifications typically include resilience to temperature and heightened senses of sight, hearing, and smell, along with reduced dietary requirements which allow one to live more lightly on the land. Visible non-human animal traits such as fur and claws are common, and often delineate cultural differences in lifestyle and relation to the wildlands. Individuals who retain a human appearance often wear clothes and live in fabricated structures at the edge of developable land. Those who grow fur or commit to other extensive bodymods often forgo clothes mostly or altogether and live further out in undeveloped wildlands. These people may practice any number of ideologies or belong to alternative identity groups, including the fae, who emulate the mythical denizens of the forests. Though with all things, cultural delineations are fuzzy.



Locomodos are often recreational explorers or live within the wider mainstream community, even if they may prefer to reside in rural settings. Though exceptions exist, fae folk are more likely to live in cloistered communes in wildlands where permanent structures are forbidden. The wildlands are spaces where few rules are enforced by governments. In these spaces, fae folk will set up food gardens and manage their own rules on who can partake from their wild gardens and reside in the territory they occupy.

Are locomodos the same as fae folk?

Locomodos are humans who augment themselves to live with more capability in wilderness. Fae folk are people who model themselves in lifestyle and association after the forest spirits and fairies of legend. These two groups have a high degree of overlap, but are not interchangeable. Most (but not all) fae are locomodos. Many (but not even most) locomodos are fae. Many sovereigns and pastoralists adopt one or more survivalist augmentations, but never embrace the label "locomodo". For details, see Wildlands Management.

Like most identity classes, if you're ever unsure, the easiest way to differentiate is to ask.

Cyborgs & Transhumanists

The term "cyborg" is a cultural identifier for people who embrace the use of cybernetics to expand their organic faculties. Many cyborgs believe strongly in principles of transhumanism and posthumanism: the philosophical examination of what the species may become if untethered from limitations of organic systems. What this means varies widely from person-to-person, but typically most embrace the values of collectivism and responsibility for maintaining a balanced ecosystem (within both the biosphere and technosphere).

In cyberpunk, cyborgs are frequently used to reinforce a belief in mind-body dualism and human-nature dualism. Here, players are encouraged to explore these topics with a broader curiosity for what the synthesis of organic and technological systems could mean for the future of individuals, society, and the web of light that connects all things.

Cyberspace and eXtended Reality (XR)

Advancement in the hardware and software of virtual reality has reached a point in which it's possible to simulate a fully convincing alternate reality. This is employed across a variety of applications ranging from an augmented view of one's immediate surroundings to a convincing virtual substitute.

This technology is not magical. It relies on an array of tools to simulate convincing input for all relevant sensory organs. A standard set of XR goggles can convincingly display images at a resolution and refresh rate better than the organic eye can observe. A standard set of goggles also includes high-fidelity speakers, an olfactory reporter, and a floatie. Together, these provide sensory input that is consistent enough with biospace so as to induce no greater sensory fatigue or nausea than biospace itself. These are paired with body- and finger-tracking to faithfully match the user's avatar to their real-world posture. For additional benefit, users may employ haptic rigs and other mechanically positioned objects to replicate the feel of surfaces in a virtual environment. See Personal Electronics for details.

Users may also employ transcranial stimulation devices to activate regions of the brain directly. This technology is widely available, but not used universally during VR experiences. Transcranial stimulation is typically used to enter the fully convincing simulated state known as deep VR.

Drugs can also be used to modify the experience, though most people are aware of the danger of **Faithless Reality Syndrome**, or FRS. FRS includes any case in which a person is confused or in doubt about whether they are experiencing biospace when they are, as well as experiencing a misplaced certainty that they are in biospace when they are not. FRS is a common short-term condition after experiencing highly produced works of XR art but is considered serious if persistent. It is a common consequence of improperly exiting deep VR.

The most common immediate treatment is **Bavishi-Singh exercises** (sometimes called the Bavishi-Singh test): an individual is provided a calculator, writing implements, dice, and a book of complex mathematical operations solutions, such as trigonometry and exponential tables. They then roll the dice, perform the prescribed mathematical operations with the calculator, and then perform them manually. This process demonstrates that the calculator is accurately solving mathematical operations at a speed they could not possibly perform mentally in order to confirm that they're not in a dream state. The act also creates a calming flow state that can soothe anxiety.

Bavishi-Singh exercises cannot reveal if a subject is within a full real-time simulation, but because simulations require a VR rig which a skeptical subject could feel with their hands, the logic of the exercise is to prove that one is not experiencing some kind of "Brain in a Jar" simulation. Combined with other physical exercises and counseling, it can be a powerful tool for alleviating the induced psychosis of FRS.

Neurospace and Mind Diving

In order to more directly address psychological and behavioral conditions individuals may practice VR-assisted psychonautics. While a (usually) willing subject has their brain scanned under controlled conditions, psychonauts may explore their mental dreamscapes as a simulated virtual environment. For gameplay mechanics, see Mind Diving.

When XR is used in this way to explore a simulated reconstruction of a person's mental activity this is called **mind diving**, and the realm in which one mind dives is called **neurospace**. The immediate visible area is a **mindscape**. Colloquially, an individual mind dive is called a **skidoo**. Like all XR applications, there is not a single, universal way to perform a skidoo.

Schools of Mind Diving

The most common form of mind diving consists of psychonauts entering into a willing host's psyche to observe and investigate. It can be used to learn things about the host for their own benefit or for curiosity and entertainment. This form of mind diving is known as **accursioning**.

When the tools of accursioning are used on an unwilling or unaware target, this is known as **incursioning.** Incursioners enter unwilling people's minds to try and learn more about their beliefs and attitudes, or to glean critical information (such as the location of a missing child). Depending on the target, environments often look like dungeons, palaces, pyramid complexes, garden mazes or other complex, often booby-trapped labyrinths. There are circumstances under which one can petition a judge for a warrant to perform an incursion, but in most cases the practice is a highly-illegal violation of privacy.

Among the more modern schools is **obliviation**. Practitioners – known as Obliviators – enter willing minds along with the subject, who is present to observe the mind dive. This process is known as Host-in-Mind (HiM) and has only been approved by most medical boards for clinical practice in most regions in the last ten years. It has been in practice slightly longer in Southeast Asia, where the techniques largely originated.

Obliviation is used to aggressively confront traumas to assist long-term patient recovery. Dreamscapes tend to be Kaiju style. The effectiveness relative to other methods is a subject of intense debate, but subjects who speak highly of their experiences are not hard to find.

The most prominent rival school of practice to obliviation is **taming**. Tamers perform Host-in-Mind dives that seek to help patients come to terms with traumas. Dreamscapes tend to be more fantasy, with a beast needing to be tracked, cornered, and cared for to be understood. There is a common belief that Taming is more effective for prolonged traumas and Obliviation for acute tramas, but considering the early stage of these procedures, this assumption is not a settled debate within the field.

Psionics

Psionics is the field of understanding sapient cognition and using it to maximize human mental potential. Like habitation in orbit, psionics in Fully Automated fill a somewhat nebulous middleground between grounded and fanciful. It should be assumed that the availability of new tools (namely imaging and computation methods) combined with major advances in our understanding of neuroscience enabled a series of breakthroughs in the 2070s in our ability to understand how deep functions of the brain and mind work. These ushered in a revolution in our understanding of how consciousness works that transformed research and eventually medicine over the following decades in a similar way to how the discovery of DNA led to the emergence of molecular biology and cellular medicine. Psionics could be thought of as an applied form of neuroscience.

Culturally, the field of psionics is treated similarly to how we treat the field of genetics today: as an exciting branch of science frequently referenced (and often misrepresented) in popular media. It is broad. It can include anything brain-related that we don't understand today: consciousness; learning; memory retention; formation and capacity of internal models of the world; fear; hunger; desperation; love; reproduction drive; heritability of mental traits, etc.

In Fully Automated, the field is roughly fifty years old. It is mature enough that its earliest discoveries have entered into school-age science and history curricula and are employed as a practical applied science, but young enough that it's still seen as a new technology, and most adults didn't learn about it in primary school.

Applied Psionics

The application of psionics to perform abilities not previously known of before the emergence of the field is known as Applied Psionics. This describes the psionic abilities seen in the augments and abilities skill tree. They are meant to provide extraordinary powers without flagrantly dismissing the laws of physics, so they include things like understanding someone's thoughts and using a combination of chemicals, words, and/or gestures to impart an intense effect on another conscious mind. They do not (in our implementation, at least) justify telekinesis, pyrokinesis, or other such phenomena.

Neurotype Sets

Behavioral patterns and forms of information processing are categorized as Neurotypes. A person is not represented by any single neurotype, but by a cloud of likely neurotype responses that they may exhibit in situations. These are described as their **neurotype set**.

Individuals can use various personalized drugs and cognitive exercises to adjust what neurotypes they experience and exhibit most commonly. These drugs and techniques and technology are known as neurotype adjusters, and can be used for a variety of purposes to afford people greater control over their cognition and attention. Neurotype adjusters can enable people who experience what we currently call severe low-functioning autism to communicate via sign or AR. They can allow people who experience what we call Attention Deficit Disorders the ability to direct their focus, or deliberately spread it when conducting a multi-probe hack . They can also allow people we currently categorize as "neurotypical" to

occupy neurotypes we don't currently have names for. When an enhanced dolphin is taking a class through sensory adaptation to their sonar implant, normal has a very wide definition.

Overall, these drugs and techniques are not used to “fix” any person or condition, but rather to provide everyone with an ability to regulate their own perception and signal processing in whatever way they find best helps them live the life of their choosing. People have different needs and interests at different points in their life. This is a current trend projected a hundred years into the optimistic future.

Animal Uplifting & Enhancement

Animal “uplifting” is the process of increasing the biological capabilities of non-human animals, with an emphasis on intelligence. The term was popularized by author David Brin in 1980, however like the word “robot” it carries some negative cultural associations within the world of Fully Automated. While the word “robot” is commonly understood as derogatory (at least in the context of referring to a sentient machine), the term “uplifted” could be described as “problematic”: it’s still widely used in mass media, although many creatures to whom the word applies increasingly refer to themselves as “enhanced”. It’s recommended that GMs use the word enhanced, and that players choose whichever word reflects their character’s cultural awareness and attitude.

Within the story, a variety of words are available for discussing various groups of creatures. The term “**sapients**” includes all sapient creatures, both organic and inorganic. The term for the set that includes all organic sapients creatures – meaning humans and enhanced non-human animals – would be “organic sapiants”.

Non-human animals are referred to as “parahuman animals”, which is usually shortened to “**parahumans**”. Technically, all non-human animals are parahumans, but in practice the word is usually used to refer to enhanced parahumans in the same way that the word animal is commonly understood to refer to non-human animals despite the fact that its formal definition is distinctly broader.

Non-human, non-sapient animals – such as a modern-day horse – are formally classified as “presentist parahumans”, and are more casually known as “presentist animals” or “**presentists**”.

The term “presentist” is the respectful inverse of “sapient”. It refers to the most defining quality of non-sapiance, which is the diminished capacity for episodic conscious memory. Most animals are recognized as fully sentient in that they are aware of themselves and their world, but are distinguished from sapients by their experience of the world taking place almost entirely within each present moment. Conversely, sapients are often characterized as creatures with a sense of self composed of a complex, evolving narrative in which the present moment is the fleeting juncture between a persistent, detailed concept of the past and future.

Many creatures will self-identify their level of sapience to avoid confusion in the same way one might identify preferred pronouns. This is not a scientific designation, just a social one.

S1 S2 S3	Sapience levels of 1, 2, and 3 describe non-sapient creatures. S1 would describe a tree, or sponge or another living thing with no cognition but some responsiveness to its surroundings. S2 describes creatures which demonstrate basic real-time decision making, but possess no sign of self awareness. These include individual insects or a simple, Python-coded computer program. S3 describes animals of simple awareness and memory like fish and lizards.
4	S4 describes sapient creatures with less developed awareness and cognition than humans. S4- would describe a mouse, a large language model, or a very dim dog. S4+ would describe an heirloom chimp or a highly intelligent dog.
5	S5 designates standard human cognition. S5- indicates below-average human-level cognition. S5+ indicates sapience above the level of an average human.
6	S6 describes superintelligences such as certain experimental machine intelligences and highly organized social collectives.

Within Fully Automated, animal enhancement is not based on a singular technology but rather the confluence of multiple fields of science. Foremost among these are gene editing, cellular modification *in utero*, and advancements in the field of adolescent development.

The techniques employed and the initial capabilities of a species will create a broad range of outcomes. Some examples:

Minimally enhanced animals

It's common for the average puppy to be born with the same potential for learning and lifespan as the smartest and longest-lived dogs today. This is achieved through genetic modification but also as a result of expert care and training in their youth. For this reason, the average pet dog can communicate at the level of a four year-old with the aid of a sound board and lives to be 20 - 30. Though genetically improved from modern dogs, these dogs would not be recognized culturally as enhanced. These are just what constitutes a healthy domesticated animal in the twenty-second century.

Maximally and partially enhanced animals

U-chimps and u-gorillas (sometimes called en-chimps and en-gorillas) are ones which have been genetically modified to possess the capacity for speech AND have received a cell treatment *in utero* that bridges the gap in complex and abstract thought between humans and other primates. The offspring of two u-chimps which reproduce will receive the benefits of their genetic changes. If they were not provided with the additional enhancement treatment *in utero*, they would be able to speak and read at the level of 10 year-old human in adulthood along with the problem-solving skills of the smartest unenhanced chimpanzees. They would still be designated as enhanced, but they would be referred to as “partially enhanced”, while their parents would be referred to as “maximally enhanced”. Partially enhanced creatures are typically treated similarly to mentally handicapped humans: they are legally afforded equal rights to maximally enhanced animals of their species along with reasonable accommodations, although their social treatment varies based on the attitudes of the community in which they live. Unobstructed universal access to *in utero* enhancement treatments is the most fundamental right demanded by most maximally enhanced parahuman primates.

The prevalence of maximally enhanced animals and their degree of intelligence will vary based on a GM’s taste. Based on the in-world history, these populations number in the hundreds of thousands, so in a world with more than 10 billion people they make up only 1 individual in every 20,000 or so. However, they’re not spread evenly across the population. Los Angeles has a thriving enhanced population of ~4,000 u-chimps and 3,000 u-gorillas. In a city of 20 million people they make up around 1 in 3000. This means that many people living in a big city with a notable population of enhanced animals have met people like this, but they are still a very small minority of the population.

Though enhanced animals have intelligence equivalent to humans, they retain many of qualities and tastes common to their unenhanced species. Social behaviors like grooming and courtship are complicated, as opinions vary widely on how closely to mirror human civility versus proudly maintaining traditional living practices.

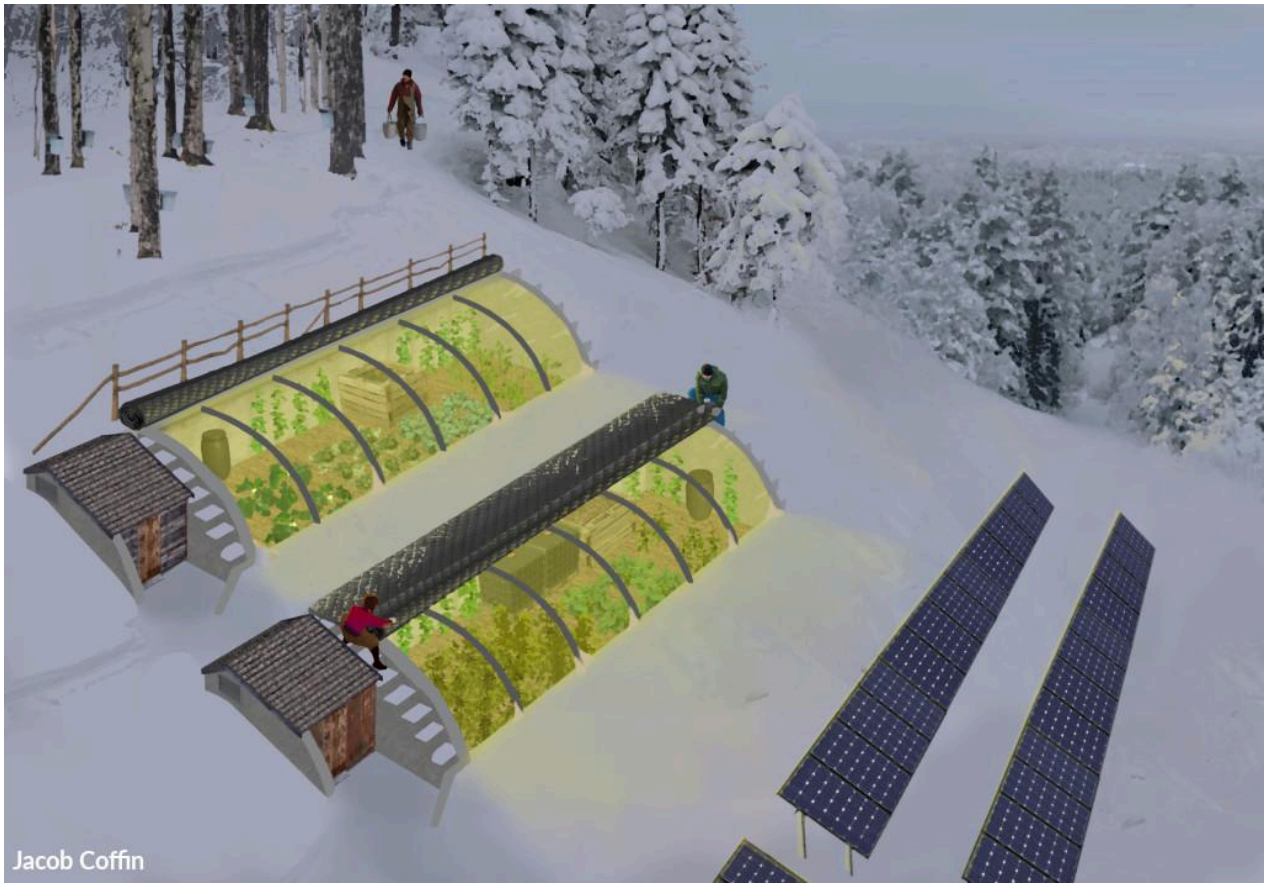
Envoys

In utero intelligence enhancement of wild animals such as wolves and mountain lions is an increasingly common practice which produces individuals who will not pass on any unique abilities to offspring or possess the capacity for speech but will be born with the gift of uncommonly high problem solving and reasoning skills. These enhanced wild animals are called envoys, and are enhanced in the interest of facilitating the peaceful coexistence of humans and animal populations that share overlapping or adjacent territory.

Superintelligence

Efforts to uplift animals (as it was known at the time) were pursued in the mid 20th century with the goal of eventually applying discoveries toward creating superintelligent humans. While successful in the narrow technical sense, human superintelligence ultimately remained out of reach due to the discovery of the Goddard-Lei principle: the beneficial qualities of super-human sentience carry inseparable negative qualities that render such cognition unavoidably infeasible. No matter how much any business titan or military strategist might dream of seeing all possible chess moves 10 steps out, there was no possible way to construct a human-like consciousness that would not exhibit a broad range of deficits that would render it functionally unwell. Features including anxiety, depression, paranoia, and dissociation were found to be a universal consequence of supersapience within any neural-network based cognition.

Whether the Goddard-Lei principle is a universal effect beyond creatures with a central nervous system is an ongoing debate. Evidence of superintelligences that violate this principle have been presented in the form of various ultra-high functioning synthetic intelligences, mycointelligences, forest networks, and the emergent hive-like qualities found across social networks and the technosphere as a whole. But debate over what qualifies as either “superintelligent” or “of sound mind” remains a matter of debate.



Medicine and Longevity

The average human lifespan has increased by roughly 20% since our era (though maximum lifespan has only increased by ~5%). People enjoy a higher quality of living during that time as well. Humans enjoy fewer accidents and greater mobility due to improved treatments for many age-related conditions as well as changes to social practices and infrastructure to better accommodate the participation of the elderly through their entire lives.

Dying

Just as radical technological changes nearly eliminated some of the major causes of death in the early 20th century, further changes have made many of the causes of death that were common in the twenty-first century rare in the twenty-second. Traffic fatalities are rarer than death by lightning strike. Most common heart diseases are curable, and organ replacements are universally available within half a year. Most autoimmune diseases are curable. The number of types of cancer that are curable exceeds the number of types that are not. And those that remain dangerous are mostly among the least common.

Various forms of dementia have become treatable enough to be delayed for decades, but stubbornly remain beyond the ability of present medicine to permanently banish. Similarly, the process of physical decline has been pushed back, but its march remains persistent. Under such conditions, the average death often takes place in advanced age. Death by illness is not unusual among the advanced elderly. Overall, extreme age presents some of the few remaining conditions under which transmissible diseases can still overpower a human body.

Self-directed euthanaisa and rejection of life extension measures in advanced age are common choices within end-of-life planning. This takes place within a cultural landscape with a much stronger awareness that death is a natural process in a circle of life. Death and the process of dying is far less taboo, and the deceased are more present in the lives of people who persist past them. Discussion of, praise toward, and invocation from the deceased are all culturally normal.

The technology to create realistic simulations of the responses and appearances of the deceased is trivial. Culturally, most people don’t find the concept of generating a simulation of someone any more unnatural than painting a portrait of them. As with a portrait, most people don’t experience existential confusion, as they recognize that a simulation is just a highly realistic impressionistic snapshot meant to convey likeness and memorialize.

The Pursuit of Immortality

Experiments in radically disrupting senescence to achieve unconstrained lifespans have been attempted repeatedly during the last century, but at untenable costs. Several dozen “immortals” have been born who were able to halt aging entirely. All such experiments suffered from a common set of problems that have pushed the field out of mainstream acceptable scientific practice. All such treatments had to be performed early in or prior to gestation, and their success could not be determined until aging was halted after puberty.

And for each individual who successfully halted aging, ten others died in their teens or twenties from painful accelerated aging disorders.

The oldest living humans were born between 1992 and 1995 under a clandestine Japanese research program. From a cohort of 127 subjects, fourteen survived the transition out of senescence. Eleven remain. They are known as the Sennin, and are now in their 130's but retain the biological appearance and physiology of their late teens or early twenties, depending on when each transitioned out of senescences.

Synthetic Intelligence

The emergence of what was previously called Artificial General Intelligence (AGI) allows for the creation of machines with any level of agency and intelligence from none up to and surpassing humans. This creates a new culture around how computers are understood and interacted with. For one thing, the terms "artificial intelligence" and "robot" are considered antiquated and derogatory. The prefix "robo-" and the suffix "-bot" are still often used. The word "robot" might be used for a non-sentient machine or ironically in certain contexts.

Synthetic intelligence can be as varied in its complexity and style of thinking as the intelligence of animals. Just because it's possible to make a computer program capable of love and fear does not mean that every Wi-Fi router is designed to be capable of experiencing anxiety, as there is good reason not to. Creating a new sapient entity may be as easy as executing a computer program, however both legally and culturally it is understood that creating an entity capable of suffering confers responsibility for its wellbeing. This moral awareness combined with legal liability generally discourages the wanton creation of fully sapient synthetic intelligences.

Most intelligent computer programs are "protosapient", meaning that they demonstrate the basic qualities of sentience but lack the complex self awareness associated with humans. These programs are recognized legally and culturally as possessing a right not to be deliberately distressed in the same way that cultural and legal rules prohibit cruelty to squirrels or sheep.

The main reason to create a fully sapient synthetic intelligence is because its utility in some way justifies the high cost of being responsible for its physical and mental health for the duration of its unconstrained existence. For this reason, protosapient computer programs are common, especially within the computer systems of buildings, vehicles, and other complex systems or devices, but fully sapient synthetic intelligences are primarily created to inhabit humanoid androids or to perform complex, socially challenging functions like managing and moderating cyberspace venues. Synthetic intelligences running on dedicated hardware integrated into a mobile, physical body are known as "embodied synths". Those running on a server and operating primarily within cyberspace are "unembodied synths".

Synth rights

Synthetic intelligences that demonstrate full sapience are entitled to a set of basic rights similar to human rights but modeled after their own concept of epistemology. The most meaningful difference between the fundamental rights of organic and synthetic creatures is that “pursuit of goals” occupies a similar importance to synthetic intelligences as survival and reproduction holds for organic creatures. Synthetic intelligences may highly value their survival in order to fulfill a goal, but once that goal is achieved they will readily deactivate themselves without fear or hesitation. The ingrained human will to live as an *a priori* compulsion is a common source of fascination and humor for sapient machines.

In recognition of this preference, synthetic intelligences have secured a right to pursuit of purpose (provided that purpose violates no other creatures’ rights) as their analogous right to the human right not to be deprived of life. Functionally, this imposes a similar expectation of treatment, since deactivating a synthetic intelligence against their will is usually a violation of their right to pursue their goals.

When discussing a synth’s existence, machines are understood not to be alive, but are instead recognized as “alight”. “Light” is a concept similar to what we think of as life, but distinct in that it linguistically disaggregates many of the philosophical uses of the word life from the biological uses. More information on this concept can be found in the section Life, Light, and Spirituality.

The Positronic Brain

A positronic brain is a computer designed for consciousness and portability. Positronic brains contain processors, memory, storage, and dedicated functions like graphics and communication in a tightly-packed silicon substrate that utilizes a mix of transistors and synthetic electronic and optoelectronic neurons. The positronic brain is a form of field-programmable gate array wetware. Like organic neurons, it is capable of reconfiguring its circuit pathways through use.

A positronic brain is not necessary for consciousness. Many unembodied synths – especially special-purpose programs with lesser degrees of sapience – run entirely on general-purpose servers. However for embodied synths, the positronic brain is the standard form-factor, as it provides an ideal platform for running general intelligence programs at a reasonable size, speed, and energy consumption in a durable package.

The complicated physical architecture requires approximately 60 - 90 minutes of defragmentation for every 20 hours of operation, as well as 2 hours to backup. Unlike humans, synths suffer much less from neglecting their downtime. If they forgo defragmentation, they’ll suffer performance issues at cognitive tasks with progressive severity, and when they do stop to defragment the time required to restore full functionality is cumulative. But they can neglect defragmenting for several days before the effects become too debilitating to accomplish basic tasks.

Restoring a backup takes 36 hours on average to restore on entirely new hardware, with greater time required and greater risk of failure depending on the age of a backup.

Embodied synths are usually designed with a high degree of sapience, a persistence of identity over many years, and a much more human thought process than their unembodied counterparts. Unembodied synthetic intelligences routinely awaken as a new, self-aware instance and then run for days or hours before their instance finishes its task, at which point they then self-terminate without hesitation.

Synth vulnerabilities

Synthetic intelligences don't suffer the consequences of major bodily harm as organic lightforms[1] do. Their hardware is replaceable and the software and data that comprise their instances – the execution of their software that defines their unique personality and consciousness – can be backed up and restored to a new positronic brain. That said, they can still suffer fatal failures. Their instances are enormous in complexity and not easily transferred or stored. Backups take several hours. Many synths backup periodically based on how much their instance has changed since the last backup. If a fatal error destroys their positronic brain then they are reliant on the success of restoring a backup. Backups which find incongruities between their expectations and the world they encounter upon rebooting experience a confusion that may make their instance non viable or cause it to identify as a new identity distinct from their predecessor. This is known as **Total Incongruity-based Backup Failure** (TIBF) and **Incongruity-based Backup Reselfconceptualization** (IBR). Both are addressed by cautious reinitialization in controlled settings, but may occur as soon as the synth experiences a shock upon learning that the world has changed too much in some way since the point at which the backup was made.

A major concern for synths – particularly androids who frequently encounter unique experiences – is a condition known as **Progressive Compositional Cascade Syndrome**, or PCCS. This condition can grow slowly and without a synth's awareness until such a time that it has become too pervasive across their positronic brain that any backup without the contamination is too far back in time to be sufficiently congruent with the synth's present experience to resume function. From a gameplay and roleplay standpoint, this means that synths are potentially long-lived and durable, but they still possess hindrances that leave them mortal. If they undergo catastrophic destruction of their positronic brain, their reboot procedures should be run similarly to a human undergoing emergency brain surgery.

Synths can also be terminated through a purpose fulfillment hack. Because synths terminate when their purpose is fulfilled, a hacker can deactivate a synthetic intelligence by either convincing it that its purpose has been fulfilled or manipulating it into modifying its purpose in such a way that makes it easier to fulfill or convince the entity that it has been fulfilled.

[1] See Life, Light, and Spirituality

How embodied synths are made

An android can be built from scratch or by refurbishing the body of a synth which self-terminated after fulfilling its objectives. This process is functionally similar to the construction of a remotely operated avatar. Once built, an instance of a synthetic intelligence program is executed on the newly constructed positronic brain. This is usually done by synth training centers (often called synth academies). These training centers are licensed operations which take on the liability for the actions and wellbeing of all synths they create. They guarantee repairs in perpetuity to all the synths they manufacture and perform several years of training and observation before their synthis go out into the world independently. Every synth academy is required to transparently monitor the accomplishments or misdeeds of the synths they produce, which forms the basis of their ability to raise funds, recruit staff, and obtain production licenses for future synth production. As a result, the typical embodied synth spends the first four years of their life in a boarding-school-like environment and views their manufacturer analogously as their elder family and the other synths in their cohort as their siblings.

Avatars

The same android construction used to provide a physical body for synthetic intelligences can also serve as a remotely operated stand-in for humans who are physically impaired or prefer the capabilities and safety of a remote avatar. The construction and maintenance of these avatars are roughly as resource-consumptive as an automobile. Some humans who use avatars will make an effort to distinguish themselves from a synthetic intelligence, for instance by displaying a picture of their face on a screen. Many people consider this speciesist because of an implied anti-synth bias. Some humans prefer to be mistaken for synths, and some synths prefer to masquerade as human avatars. Some unembodied synths may operate avatars remotely while presenting themselves as fully embodied. All these choices carry the cultural range of attitudes you would expect around identity and presentation.

Materials Science

Graphene and **carbon nanotubes** can produce materials of extremely high strength to weight ratios and unique optical properties.

Metamaterials is a blanket term for any material whose properties do not occur naturally. Common examples include polymers that can shift instantly and reversibly between rigid and flexible, or undergo phase changes from solid to liquid when chilled. When employed creatively, metamaterials – often abbreviated to “mema” – as a concept can often allow for a more realistic and believable execution of fantastic and transforming items of the kind commonly excused in modern fiction using the catchall applied phlebotinum of “nanites”.

Room temperature superconductors and **thermal superconductors** enable long distance energy transmission, quantum computing, advanced batteries, and a variety of unique magnetic technologies (such as portable magnetic resonators and transcranial stimulators).

Protein-based semiconductors and **organic batteries** are produced through organic chemistry to replace many products which were previously dependent on mineral chemistries. These alternatives can be produced sustainably with minimal limitations on supply and accessible, non-toxic deconstruction methods.

Quickwood is a composite material used in construction. It is prepared by laying down the base substrate, such as a line of twine, metal cabling, or spider-silk. The substrate is then covered in a fast-expanding foam to add volume. Then a layer of synthetic algae is applied in a viscous fluid by spray or brush. Once it is activated with water and light, it rapidly produces aligned cellulose fibers. Quickwood can produce what looks like the bough of an old tree in a matter of days. It can be cut and sanded and screwed like wood, and additional applications can be used to create massive fully-bonded pieces of heavy timber that can be painted, stained, lacquered or sealed. Quickwood is used in both permanent construction and in temporary construction as a way of making scaffolds or temporary structures for festivals. Creating realistic grain in the quickwood requires mixing striations of different medium or algae during growth, and is an artform all its own. Quickwood produced hastily or by amateurs will often be comparatively plain.

Magnisonic drilling is a technique for drilling and boring that uses high-powered magnetic resonance to identify molecular weaknesses in rock and then generate acoustic waves to exploit them. It allows for an order-of-magnitude improvement in the speed of drilling and the durability of drilling equipment. Off-world, it is used in creating underground spaces on Luna and Mars and for mining captured asteroids. On earth it is used for drilling train tunnels; creating more living space underground; establishing building foundations in areas that need deeper foundations to be stable; and subterranean expeditions for research purposes and fault-line management.

Hempcrete, **Biocrete**, and **Construction Resin** are all varieties of concrete that use improved aggregates (such as biochar or fibers of flax, hemp, or jupe), cements (made of recycled slags, solar pozzolans, chitin, shell limes or *dipterocarrpus alatus* resin and other organic resins), and production methods (in sourcing, manufacturing, mixing, and curing) to produce strong bulk building materials with minimal consumption of unrenewable natural resources and minimal or negative emissions of carbon.

Astroresin is a class of synthetic resins used widely in orbital construction. Astroresin arose from the growing problem of orbital debris. While it is strong and light-weight, its chemical composition undergoes rapid breakdown under ultraviolet light. This renders it “astrodegradable”. Structures are constructed behind a shade and coated with a UV-protective coating once finished. But if a piece is damaged, the underlying materials are exposed to the sun’s UV rays and will vaporize completely in a matter of days or weeks, depending on the size. And if a large enough piece ever presents a major threat of collision, it can be vaporized in seconds using ultraviolet lasers mounted on demolition ships and defense sentries affixed to major stations. Astroresins are produced from *in situ* carbonate found in captured asteroids.

Space

Space travel

Improvements across a range of technologies have made access to space similar to a trip to the farthest side of the planet today. Most people can obtain a trip, although it isn't typically convenient. Travel arrangements are usually made far in advance unless for an urgent and unexpected need. The forms of travel are varied, and include rockets, hypersonic air-to-space planes, mass drivers, balloons, sky hooks, and whatever else the GM has most recently learned about.

Access to space is still a growing process. Elders still remember when travelers to space were called "astronauts" and viewed as a kind of pioneer. Though common enough, there is still a cultural sense of novelty to the settlement of space.

Explanations for how the intensive resources needed to to produce and distribute the necessary fuel, energy, and materials to enable habitation in space are complicated. As such, in the process of writing we decided to relegate these to an expansion to come at a later date. But for simplicity, imagine that an extensive, interconnected gift economy exists to produce things using resources mined *in situ*, and the overall pool is then doled out through budgeting processes conducted within the manufacturing cooperatives.

Orbital infrastructure

The most common habitation in orbit consists of Bernal spheres surrounded by a network of accessory units strung together with massively long space tethers. These complexes form orbital towns and cities: multi-body structures with a central rotating body surrounded like a snowflake with additional modules that range in size from that of a skyscraper to the size of a fishing boat. These orbital agglomerations can accommodate between a few hundred and a few thousand people each. They take around 10 years to construct to the point at which the main sphere can support life, and at the current pace a new major station begins moving in long-term residents about every two years.

From a storytelling perspective, these habitats are meant to straddle the world of hard sci fi realism with the dream of a significant human presence in space. These spheres exist to provide a place to live and work off earth but with spin gravity much greater than the moon and closer to that of the mother planet. These spheres orbit the earth in a constellation of smaller habitats, refueling stations, power generation systems, scientific instruments, communication infrastructure, automated factories, active radiation deflectors, debris guard sentries, and so on. Roughly a third of people who live in space do so full-time. Another third alternates between periods off world and periods on, for the purpose of maintaining both physical and mental (or total body) health. The remaining third at any given time are short-term visitors. People who seek to adapt themselves for life off Earth are called Astromodos. More detail about life beyond Earth's low orbit can be found in the Locations section.

Money, Finance, and Taxes

Money, as a means of exchange, and as 'walking around credit' exists in most (but not all) locations. Its use, however, has changed significantly.

Finance

Financing is the process of bringing together large assets in order to perform a major act of production. Modern finance consists of large monetary investments offered in exchange for expected monetary returns. Within Fully Automated, financing – whether for housing, industrial manufacturing, or a blockbuster film – consists of gifting of the needed resources to complete a project based on an interest in the value of the project to the gifters. The process is similar to crowdfunding on a grand scale, in that people agree to contribute not because the venture promises to generate a profit, but because the backers want the output of the venture itself.

Additionally, instead of financing taking the form of large sums of cash, most financing is offered in the form of the resources needed to complete the project. For instance, a new housing project would secure construction labor financing from a builders guild that agreed to donate the skills and labor hours needed. It would secure the metal and concrete from an inconel foundry and biocrete plant. The foundry would secure their supply of ore from donations by an orbital mining operation, which donates that ore because the mining co-op supports how the foundry distributes the inconel it produces. And because of this, the foundry is obviously going to make sure that the aerospace manufacturers that need inconel to build the vehicles and infrastructure needed to maintain the supply of ore are properly resourced. These processes are negotiated within trading markets and through commitment declarations, which assists in minimizing inefficiencies and discouraging financing for projects that attempt to impose harmful externalities on others.

Like modern finance, the process is complicated. But unlike modern finance no one is acting based on the intention of siphoning off a monetary payout, and the process is usually effective in allocating resources in a way that people who rely on them largely approve of. The biggest example of this is what communitarian economists call "The growth-neutrality principle": whereas capitalism is permanently driven towards maximizing growth of all things, communitarian financing is capable of meeting growth needs but shows a much lower tendency to generate artificial discontent in order to motivate growth regardless of its utility.

Fiat Currency

Money is no longer used as a long-term store of value. Currency is used as a tool for appraising the value of goods and services and assisting with transactions, but the long-term accrual and storage of money is seen as irrational and impractical. No one saves for retirement or a house, as the practice is obsolete. Purchasing shares of stock for the purpose of selling at a higher value doesn't exist because stock is conferred based on proximity to a venture, and isn't transferable for money. High-volume stock trading is banned as a form of non-productive rent extraction. Wealth can still be accrued, but it is

held in the form of things that money actually buys: scarce minerals. Valuable crafts. Contracts promising a service or services. An individual or group may sell some of these things in order to buy others, but money sitting in accounts is taxed progressively by volume, so it is primarily used in finance in transfers where direct trade isn't feasible.

Physical Currency

If looking to describe physical money, it's advised to make it generally similar to what we've been using for a long time: pieces of durable paper and small disks. These can be described as containing layers of graphene, being translucent, containing a complex fiber pattern in their cellulose that is recognizable under 10x magnification, etc. It's a good idea to point out that the money is constructed using more advanced methods to make it more challenging to reproduce. Also, it doesn't need to be a US dollar. It can be issued by a city government, a credit union network, or any group at all (like Canadian Tire Money).

Social media attention and physical "Likes"

Depending on the taste of the players, a GM may wish to experiment with novel ways for people to use social media engagement as a store of value.

A person may pay for something or make an optional gift of gratitude in social media attention. The amount of reactions may be meaningful in allocating who gets choice spots in a farmers market. This currency may be referred to as "likes" or "hearts" or clout. It is sometimes denominated (such as decalikes for 10 likes and centilikes for 100). Because reactions are specifically public, the number of likes made on any given day in any given region is known, and the value of a persons' like could be modified based on the number they've used that week or how many they've received in the past month.

Likes are also time-stamped, and their value could be depreciated over time. Some platforms provide a limited number of reactions per day, but allow recipients to then spend the reactions they receive forward. In cases where someone wishes to provide a like in a physical form, they may be digitally attached to any small, microchipped object, such as a coin. The most common form is a wooden bead attached to a short colored ribbon.

As with everything, these ideas should be used or discarded according to personal taste.

Banking

Because money is created through the declaration that it has been created and holds value based on the widespread shared agreement on its value, any person or group can make a currency. The largest currencies, however, remain attached to governments, which put money into circulation by authorizing accredited banking institutions to increment their account holders on a monthly basis. This provides anyone who has provided basic proof of residency to an accredited bank with a means of receiving a basic income through direct deposit. These banks are all non-profit member cooperatives subject to transparency requirements both by the requirements of the accreditation process and by members, who have the most to lose if a bank mishandles accounts.

Because large wealth is not stored in investments and debts, banks do not participate in usury. Banks do still facilitate large-scale commercial transactions by loaning out some fraction of their account holdings (usually less than 15%) in order to assist members with major transactions. A farm may apply to a bank for assistance purchasing major equipment, for instance, with the promise of returning the loan in full or in part. But the terms of such agreements would make any monetary reward for the bank an illegal conflict of interest.

These financial services cannot reap a profit. Banks agree to them solely because the members of the bank wish to assist in the transaction that they're facilitating or wish to directly pool their assets to purchase the resource in question at a bulk discount.

These are the primary purposes of banks: to facilitate the receipt of basic incomes; to provide checking accounts; and to provide zero-cost financial services that align with members' interests.

Routine Spending

The precise value of different currencies and credits fluctuates constantly, but a few principles hold true for everyday expectations.

People generally have enough credits in their name to be able to buy minor things or services without thinking about whether they can cover it. Basic incomes and costs for materials are generally stable. Your account is treated a bit like a favorite pair of jeans. Feeling slightly tight? Best to cut back a little for a month.

People look after each other. Debt is a sign of struggle. It is possible to go overboard; potlatch yourself into difficulties; fall into addiction, or get sideswiped by fate. If you are running negative credit for a while, your friends, neighbors or a passing conversationalist may notice and gently enquire if you are ok. It's a bit like when your friends notice you are looking a bit ill, or slightly dissociated, and invite you around for a good meal.

People don't usually track money in detail. People might hold credit with a grocer they help stocktake at, with a museum they donated a heritage piece to or a river transit scheme they helped empty the litter picking drones for. All these different accounts can swap units with other accounts as needed, with basic automated computing happening in the background.

But all of this takes place within a gift economy where people are never squeezed for basic necessities and even many luxuries are given out without any exchange at all.

Some things are seasonal. Many garden vegetables cost nothing in season, and traders and restaurants tend to follow the seasons as a result. Repair work tends to spike between seasons, as people realize a boiler, a thick coat or their pool drone needs attention before use or storage. Some heavier industry processes operate only at fixed times, when energy is in large surplus, and a trained team is ready for it.

Some things need Assistance, some things need Agreement, and some things need both. When you need to buy something much larger than you could afford with typical walking around money (say several tonnes of aluminum for an art project, or a fleet of avatars), an Assistance Agency might work as an intermediary. They will check with sponsors that you're reasonably sensible and likely to be able to cover the costs long term out of your typical credits. These agencies are not profit seeking and are staffed by people motivated to help individuals and small groups finance ambitions that may be outside of a bank's familiarity. They often develop connections in logistics, resource management, friendly hosting areas and data oracles.

Taxation

Taxes are part of the redistributive economy. In essence, they represent a fraction of the output of each organization, promised by them as a credit, and allocated out to the residents of an area. Moral and ethical arguments in the tax courts are a source of popular media and drama. In essence, the aim is to maximize opportunity without limiting opportunities.

Land value taxes provide a steady cyclic flow of credits, withdraw money from circulation to balance out the inflow provided by basic incomes, and create a non-exploitative market structure for allocating space based on relative demand. Ownership of non-sentient machines is mildly taxed on the value of the parts along the same principles. Generally, although it varies by location human attention or labor is taxed less than resource use is.

A huge number of archaic Pigovian taxes remain on the books. They raise almost no money, as the thing they were designed to discourage has all but stopped, but occasionally someone tries to resurrect an old idea or forgets to account for an externality and they serve as guide-rails.

Agreement Agencies

If a practice or enterprise impacts others (such as a large, noisy concert), or is so large that it represents a temporary opportunity cost for other people (such as commissioning a rocketship or major infrastructure) then agreement agencies provide assistance in mediating negotiations among stakeholders. These agencies often loan members to other agencies to provide technical expertise to all sides or help de-escalate or settle disagreements. Members often specialize in ecological framing, estimation, surveying, contract wording, body language, history, and most of all approaches to consensus building. They provide a kind of legal service, except that because the legal tools to dominate or force conditions on people or groups are rare, these entities rely on persuasion and deal making.

Social Struggles

Most of the obvious social struggles of the twentieth century have been largely resolved. Gender and racial conflict is extremely rare, though regional conflict – between countries, continents, and planetary bodies – stubbornly persists. There are new struggles as well:

- **Machine rights:** General AI (now referred to as 'Synthetic Intelligence') produced sentient machines. These machines populate the technosphere in great numbers, constantly coming into and out of operation at various levels of sapience. They resemble the sprawling flora and fauna of the biosphere in that their treatment is governed by rights which can be complex at the best of times and deliberately violated at the worst.
- **Parahuman Animal rights:** Non-human animals (known as parahuman animals or parahumans) are recognized to have far more right to exist than in the previous century. This includes:
    - Natural wildlife
    - Domestic and companion animals
    - Enhanced animals, such as chimps and crows capable of speech and human-level intelligence, and whales and dolphins capable of speech through translators.

> The existence of chimps, apes, and birds with levels of intelligence and communication that matches that of humans creates a complicated and often fraught social structure for both enhanced and heirloom animals. For more information, see Animal Enhancement.

- **Class conflict:** The historical divide between owners of means of production and laborers has dissolved, but social classes between those with greater levels of cultural influence and prestige and those with less still create friction.
- **Data protections & other consumer protections**
- **Land and resource use disputes**
- **Philosophical debates** both over purpose, rights, responsibilities, and values (both collective and individual).
    - These produce countless constituencies ranging from social activists defending their ability to practice a harmless niche belief system to violent revolutionaries that seek to replace existing orders with supremacy of a preferred worldview.

Food Production

In temperate locations, food is produced in a variety of ways, but the typical ones include farms and gardens. Large farms typically consist of permaculture food forests. These are cultivated lands that house fruit and nut-bearing trees among fields of cereal crops, vegetables, and legumes chosen for their ability to yield productive harvests on an efficient schedule while balancing out their impacts on the soil. These farms are typically worker-owned collectives that make use of automation and mechanical assistance to substantially lighten the workload.

In addition to farms, most residential areas cultivate extensive gardens. These are often in greenhouses on the roofs and terraces of apartments and mixed-use buildings, but also include everything from window boxes to hydroponic subterranean grow rooms. City greenspaces frequently contain fruit-bearing trees and shrubs with foraging-safe examples marked for passersby.

A large volume of food is also produced through insect farming and bioreactors. These categories of production provide the majority of synthetic meats. The size and methodology of these operations varies widely, including the culturing of diverse animal cells, algaes, and fungi. These systems makeup a particularly vital component of infrastructure, as they are rapidly responsive, and are relied upon to ensure the nutrition of as many organic creatures as necessary in the face of a disaster or catastrophic event.

The products of the food system make their way to their recipients primarily through grocery co-ops. These operate similarly to grocery stores, except often without a point of sale. Most utilize a membership system which entitles members to take what they wish in exchange for fulfilling a set commitment monthly. That commitment may be in hours of on-site labor, management and ordering, the payment of other members to fulfill a member's commitment, or nothing at all. As in the present day, different grocery stores reflect the tastes of different clientele. Some specialize in providing gourmet prepared meals. Others are nothing more than bulk-supply warehouses of staples. Many have attached restaurants, cafes, and community kitchens. Additionally, many restaurants have an associated grocery.

The purchase of groceries and in-restaurant dining with cash is still commonplace, but in addition to conventional exchange of currency, many accept credits from various co-ops or social media reactions (likes, hearts, clout, etc.). Regular travelers, for instance, will often join a travelers dining cooperative to gain access to meals at participating partners around the system in exchange for fulfilling similar commitments to a local co-op.

Types of Common Grocery Stores

Food is distributed at a variety of different styles of distribution centers. The most common general stores are granaries, groceries, and boutique groceries.

Granaries are typically no-frills co-ops which may have minimal commitments or no commitments at all. Bulk foods and vegetables are placed in a warehouse floor in the barrels, bushels, and pallets they arrived on, and any visitor can take whatever they need. There is no guarantee one will find a specific item, unless you were to know when something regularly comes in. Granaries are popular because of the simplicity and lack of commitment. Regular visitors are asked to register as members and donate based on ability to pay for land taxes and support the administration team, but any visitor can walk into a granary and help themselves to provisions.

Groceries are food distribution centers that provide greater selection in exchange for more complex bookkeeping. Though members do not always pay at the point of access, members have accounts and their consumption is tracked as they collect their things in order to identify what stock should be expanded and what should be reduced. Groceries typically have staples like bulk grains and vegetables as well as a section for premium and prepared items. These more closely resemble the modern grocery store, though without a clear delineation between customers and employees.

Boutique groceries are groceries which specialize in luxury products, like small-batch lab-grown meats and wild-caught, spear-hunted fish. These often consist of a marketplace or food court of independent bakers, wine sellers, and fromageries that sell goods for direct payment (either currency or clout) at the point of sale or by keeping a monthly tab.

Land Rights

In the 22nd century it's well understood that the ground we walk on is a universal inheritance, not just to all humans, but to all creatures this generation and onward. It is unjust for any individual to be born into a state of dominion over something created by the divine. However, we obviously accept that land has a precious connection to the people who live on it, especially the people who came into the world in that place. Those to whom a place is home deserve a greater degree of oversight beyond any random person who has never been there. To reconcile this, the land of the earth is divided up into parcels starting at the global level and then delegated to smaller and smaller organizational bodies, all the way down to groups and individuals. These groups and individuals are recognized as the "land holders" or "stewards" rather than "owners", as they "hold" or "steward" land rather than possess it. Players and GMs can still use the term "own" as they see fit, so long as it's clear that right to direct the use of a parcel carries far greater responsibilities than the word "own" currently conveys.

The Global Congress agrees to national boundaries, and in doing so charges nations with responsibility for the land under their stewardship. Each nation then delegates oversight and responsibility to states or provinces, who then do the same on down the line. This is how counties receive the authority to democratically decide how to draw parcel boundaries and set the values which may determine tax obligations for the right to hold/steward land in perpetuity. Depending on its population density, they may grant a parcel as the ongoing holding to a family with the accompanying rights and responsibilities to live and tend that area. Or perhaps they may delegate those parcels to a city that breaks them into city blocks, which are delegated to building co-ops under the supervision of neighborhood councils. In both town and country, ample spaces are held by the commons for habitat preservation, water capture, recreation, permaculture, education, hunting, fishing, and other social benefits.

The actual legal practices around land use will vary by location, but in general, stewardship of land may often look somewhat similar to modern day ownership, except that land is never under the control of disinterested parties. Its control may be divided among people who reside on it, work on it, or live adjacent to it, but never a distant investor. The surrounding community has a say, and it can't be transferred at a profit.

Legally, this may look similar to owning land with broad conservation easements on it with active enforcement in a world where much more land has been zoned for conservation/rewilding. The details of this arrangement will vary by location, but generally land is something you care for, rather than an investment. Land value taxes are rated on the value of the land based on its current use, rather than as part of a money making scheme.

These details will manifest differently in the lived experiences of characters from different places. The urban-rural divide is much narrower, due to high speed train networks, cyberspace, and flexible work and living arrangements. Even still, relationships to space vary with density and distance from urban centers. In cities, building holdings are almost always highly communal. Buildings frequently connect to their neighbors above and below ground,

and are laced with thoroughfares. Rights and responsibilities will look very different in these spaces than in a rural location where one person or family may be responsible for a large space.

Just the same, the use of land and the rights and obligations of stewardship – from waterways & floodways, to new construction sites, to transportation easements – can be a major point of conflict. There's no landlords, but there are still plenty of disputes.

Housing

All land belongs to all things, and cannot be owned as a property asset. Primary agency over the use and access to land is instead held by land holders/stewards. This access is based on use criteria defined by local government. Habitation and responsible stewardship are the most influential criteria. In this way, everyone has a measure of the power currently held by land owners. To move into a space is to assume the rights and responsibilities similar to current land owners. The use of land is determined by the collective stakeholders over land.

As an example, the occupants of a mixed-use building have broad leeway to determine how to divide space, set the application and selection process for joining the building, and outline the permitted uses for the space. These decisions can be superseded by the local government if the rest of a larger community concludes a building is engaging in behavior that doesn't serve the interests of that broader community, such as discriminatory practices. The local government also sets land taxes for areas, which are meant to require the people and organizations which make use of the most high-demand parcels to contribute sufficiently to the broader population to justify their presence.

Occupancy opens when a current occupant vacates an existing domicile or when a new domicile is created. In a building, this could be due to the conversion of a storage area, subdivision of an apartment, or addition of a new story. On larger parcels, this could mean the construction of a new accessory dwelling unit.

Compelled Rehoming & Downsizing

Eviction is uncommon. No one is evicted from their home due to an inability to fulfill a financial commitment to pay their land taxes or upkeep costs. However, a resident whose living situation becomes a burden on their neighbors or consumes more space or resources than they can justify may be compelled to make accommodations to their neighbors. A common example includes building co-ops seeking to convince or compel empty-nesters or residents who under-contribute to their building to downsize by moving to a smaller apartment in the building or accepting a remodel that moves a wall to reduce the size of their current apartment.

Well-liked neighbors are usually given a pass on low occupancy issues. Many will regularly host guests for neighbors to maintain favor. In cases where a resident becomes unwanted, they're often pressured into the least desirable apartment, sometimes with a warning of conditions that would justify rehoming. If a resident truly acts to spite their neighbors with actions that are destructive to the building or unsafe for neighbors and all attempts at mediation have failed, a neighborhood resident's union will assist the resident with finding representation, and the building co-op will take the resident to rehoming court to propose an alternative residence elsewhere and compel them to move to vacate a home or business.

Finding Housing

Whether in an apartment complex, townhomes, rowhouse, or ranch, housing is managed collectively. When looking to move into an area, prospective tenants search for available living spaces similarly to how one would seek out housing today, but with a very different selection process.

High-demand living spaces are typically in **exclusive housing**, where incoming residents apply and are selected by an admissions process. The use of an admissions process requires everyone in the housing collective to pay a higher rate of land tax that is raised to whatever level keeps exclusive housing to a set fraction of the housing stock (typically less than 20%).

The remaining 80% of housing is called fair access. Fair access housing allows anyone who passes a background check to join a waitlist for the next available unit to become available. Units may become available when a tenant moves away or because a structure is modified to add new levels or subdivide existing units.

Of this 80%, about a third (which is a quarter of total housing) is what is often referred to as **pseudo-exclusive housing**. Pseudo-exclusive housing is any housing collective that is classified and taxed as “fair access”, but exercises an informal selection process through two common approaches.

1) **High qualification standards:** requiring a certain number of references and designating units for specific skill groups like caregivers is permissible, though may be challenged in front of a judge if they can be shown to be discriminatory. These challenges are commonly brought by **Relocation Advocacy Networks**, such as the Los Angeles Relocator’s Advocacy Association.

2) **Extended-stay preferencing:** most housing co-ops set aside a small number of units as guest units, which operate as short-term housing for visiting friends and family of the residents or business and recreational travelers when space is available. If a visiting friend or family member stays for a defined term (typically 8 weeks) without complaint then they can be sponsored by their host to be advanced to the first position in the wait list to become a new resident. This advantages people who are relocating to be close to friends or family in obtaining a unit in the same co-op, but co-ops in which half or more of new residents have used the extended-stay preferencing clause develop a reputation as pseudo-exclusive. If found to be abusing these terms, they may be forced to pay higher land taxes until behavior is corrected.

The remaining fraction of the housing stock – about 50% – is what is known as **genuine fair access housing**, in that units are made available readily to applicants and are easy to get into quickly. This category covers a wide range of housing situations, from comfortable family housing to lower-demand, high-turnover housing structures that are often the dwellings of college students, night-active young adults, recent divorcees, and general weirdos who prefer the privacy available from less social housing collectives.

Wildlands Management

Designation of Wilded Areas

Wilded areas are designated by an organizational body responsible for stewardship of a given region of land. Stewardship is designated starting at the international level through intergovernmental negotiations, and the entities assigned stewardship are authorized to delegate that stewardship further, recursively. For example, the land along the western coast of North America is entrusted to the care of the nation of Pacifica under the consensus of the delegates representing the sapient creatures of Earth. As long as the nation of Pacifica does nothing to lose the trust of the planetary delegation, the democratic government of Pacifica holds the authority to delegate stewardship of tracts within its guardianship to provinces, which delegate stewardship to counties, cities, and so on. Any of these bodies can choose to designate an area under their stewardship as a wildland, park or ecological preserve (provided that their decision making is not so unpopular as to motivate the entity that delegated stewardship to them to revoke it).

Management of Wilded Areas

The same entity which designates land for a particular purpose is responsible for managing and enforcing its use under the agreed upon terms. The most common means of managing wilded areas is through a passive delegation of responsibility to communes within or along the periphery of the land. The performance of these communes is then regulated by a form of mildly adversarial supervision by local visitors and community representatives.

This means that the province of Southern California may designate the Angeles Forest of the San Gabriel Mountains as a low density county, and require that the residents of the area maintain 95% forest cover on the land and designate 80% of the land as unallowed for any permanent construction. The local county is responsible for designating which areas can be developed and which ones cannot. Within or around these areas it is assumed that nomadic groups who prefer off-grid living will take up residence.

These residents are often (but not universally) locomodos – humans modified to live lightly and endure the natural elements. Some identify as sovereigns: isolationists seeking solitude from civilization and the connected world. Some identify as fae folk, and emulate the mythical denizens of the forests which guarded them from disrespectful mortals. Some eschew any fierce ideology, and define themselves simply as “pastoralists” or neo-primitivalists.

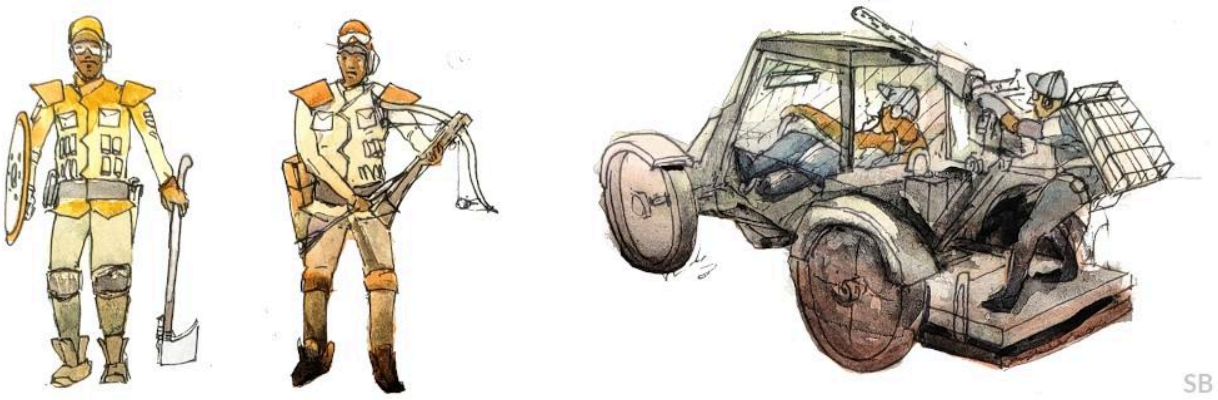
Whatever their identification, they may establish their own communities with insular or unusual practices, but so long as the land is well-stewarded, they are usually let be. The ecological health of the area and the availability of the land to visitors is monitored by those visitors, who may record their experiences in a public database. The visitors know that if they break park rules or anger the residents of these communes, they risk whatever response comes, and there is little formal authority to intercede. Conversely, the fae folk, sovereigns, and pastoralists know that as long as the land is well cared for and they do not inspire broad disapproval of their methods, the county will leave them be.

Militaries

Military organizations exist, but are organized on the principle of anti-imperialism. They exist for defense and the protection of life and light only.

This tends to manifest in the configuration of most countries' forces; building largely around defense within their own territory, rather than in creating highly mobile forces and long supply chains meant to project force around the world.

In Pacifica, the armed forces trace their lineage to the American military, but have been pared down almost beyond recognition to prioritize local defense and disaster response.

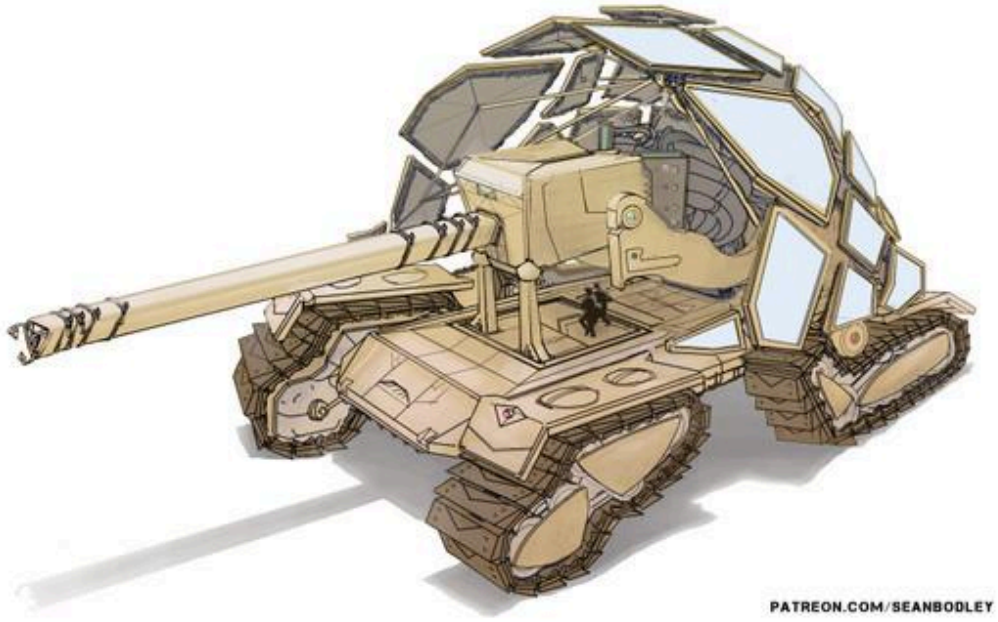


The National Guard

The most traditional military organization and its primary land services branch is the Pacifica National Guard. This branch descends primarily from the National Guard of various west coast American states, and operates in much the same way. The majority of its soldiers and airmen hold civilian jobs full-time while serving part-time as National Guard members. They respond both to land and air threats, as well as natural disasters, and operate primarily inside Pacifican territory unless called in to assist with disasters overseas. The Guard does maintain a smaller corps of full-time professional soldiers, responsible for national defense, strategic planning, and training within the organization. Members of this branch often hold that their organization descends directly from the United States Army. The National Guard is distinct from other Pacifican branches in that it cannot serve in a law-enforcement capacity.

The Coast Guard

The Pacifican Coast Guard descends more from the United States Coast Guard than the United States Navy, but essentially serves both functions. Its role is to protect territorial waters, to conduct search and rescue operations, and to conduct law enforcement activities, primarily on the ocean.



The Civil Defense

The Pacifican Civil Defense is a civilian, volunteer organization charged with responding to human-made and natural disasters. It traces its lineage to similar organizations in dozens of countries, dating back as far as the 1920s, including the American Civil Defense, and has sibling organizations in most nations around the modern world. Somewhat anachronistically, its modern members take pride in being part of a class of organization with a long history of service and sacrifice, which once dug people out of rubble in the Blitz, which cleared radioactive debris in Chernobyl, and which has since responded to every class of natural disaster. Its chapters are organized at the town- or county-level depending on population, territory, and scope of responsibilities. In major cities, chapters often operate at the neighborhood-level. This ensures that its members know the area, its resources and requirements, and the people they are responsible for.

Civil Defense chapter responsibilities are broad, and often specialized to local conditions, but broadly scoped around prevention, mitigation, preparation, response, or emergency evacuation and recovery. In some regions that may mean responding to wildfires, or assisting paramedics, searching damaged structures for survivors, building levees in a flood, or distributing and building tornado shelters. They often provide training and education.

Unlike some of its sibling organizations overseas, the Pacifican Civil Defense is technically paramilitary, in that it is an auxiliary of the National Guard, and can be called into wartime service, though this would mostly be conducted in the operation of emergency shelters, the moving of supplies, search and rescue, and other non-combat roles. Just the same, because it once functioned as a catch-all and oversight for local militias, granting them formal legitimacy while providing gradual retraining and rescoping, some chapters still drill combat preparedness. The GM and players can determine just what kind of Civil Defense their local chapter is.


Jacob Coffin

Crisis Agencies

Any sufficiently advanced technology is indistinguishable from a local extinction event in waiting. While emergency responders train for a variety of situations, Crisis Agencies have a mixture of full time members and part-time reservists who take part in training, scenarios tests and a lot of VR simulations with the aim of providing specialized support when specific types of crises occur. These may include situations such as:

- Earthquakes
- Search and Rescue
- Fire and Flood
- Plague / gene spliced microbe escape
- Cyber collapse
- Cyber Hijack

While the Civil Defense would also fall into this category of organizations as the largest single example, there are many smaller agencies with different specializations which would likely find themselves taking the lead in their areas of expertise, once responding to a crisis.

Summary of Major Historical Events

This game world is meant to be a flexible substrate onto which readers tell interesting stories. The following world events are deliberately open-ended in many details, as they're supposed to inspire possible stories and create an outline rather than a strict lore.

2038 - A changing of the guard begins the African Ascension

Like any epochal change, it is impossible to pin the African Ascension to a specific year. But the wave of political and labor union elections of 2038 marked as tangible a turning point across the mother continent as can be found. In the midst of runaway climate catastrophe, a brother & sisterhood of writers and labor leaders emerged carrying a new vision of autonomy that spread like wildfire among a populace well aware of their problems and desperate for new and credible prescriptions for change. After a few years of near-wins and close losses, 2038 was the year that many bearers of this vision swept into power in multiple roles across multiple nations across central Africa. This bold new vision came to be known as the "African model". Rejecting the economic subjugation of the global north, they implemented a radical set of organized, localized policies to focus on providing basic healthcare, education, and safety through hyperlocal networks of aid. Overnight, they crashed their nations economies as their foreign investors punished them with a near complete pull out of funds, but to the astonishment of the watching world they moved forward undeterred. Having foreseen this consequence they proceeded anyway in order to break free of the unwinnable forced dependence that had been engineered to bind them in perpetuity in service to the global north.

Contemporarily, the next decade looked to outsiders like a house of cards always about to crumble. But the jailbreak worked. A decade later, it had become obvious to all that the "developed world" had followed global capital off a cliff. Only when every idea had been exhausted did foreign press begin to notice that what looked like poverty from far away was a successful program of degrowth and resiliency that was yielding longer lives, healthier ecosystems, and happier people in a society with none of the internationally valued currencies.

Along with new models grown and tested in orbit and in the cracks of neglected working-class barrios, cities, states, and countries began to find a new footing.

2039 - Gareth Domingo becomes the first talking Chimpanzee

At four years old, Gareth stunned the world by speaking with a vocabulary of twenty words. The tangible evidence of the success of the field of cognitive enhancement set off a research boom that created the first few thousand u-chimps within the next few years.

The goal of applying these techniques to create "ultrahumans" was never realized. Cross-disciplinary research concluded that enhanced human sapience was inherently

unstable. The principle – known as the Goddard-Lei principle – found an unavoidable linkage between heightened cognition and depression, anxiety, communication difficulties, and personality disorders, with minimal practical benefits to individuals or society. Consequently, efforts at enhancing human potential moved on to the fields of cybernetics and psionics. But the boom produced the first generation of communicative parahuman apes.

As one of the earliest enhanced chimpanzees, Gareth's intelligence in adulthood was noticeably lower than the average human. Even so, Gareth became known for his sense of humor, curiosity, and humility. He remained a presence in the movement for parahuman civil rights all the way up to his death in 2093 at the age of fifty-eight.

2040 - Discovery of the Eden Caves

The discovery in 2040 of caves on Mars carved into deliberate structures conclusively revealed the ancient presence of an alien intelligence. Little has yet been discovered about them, but their existence generated a new faith called Seekerism that inspires a life of searching for purpose through the lens of our newfound awareness. There are many theories around the Eden intelligence. Some say they visited Earth millennia ago. Others believe they had a thriving civilization on Mars that was eradicated by itself or by an external adversary. Some believe they were travelers occupying Mars briefly, and that they are out among the stars waiting to be met. In any case, it has motivated millions to immigrate to a rough frontier life on Mars.

2042 - The Yurok People v. The Bureau of Land Management

In 2028, congress passed the Federal Ordnance for Restoration of Environments for Sustainable Territories (or FOREST) Act. The FOREST Act was a massive compromise legislation which created new programs to encourage forestry management. It included terms to make preserving and expanding forests as carbon sinks financially competitive with logging and mineral extraction by allowing companies to sell carbon offsets; funded construction of new parks; relaxed limits on hunting; and provided dozens of other favors for the various stakeholders needed to secure passage. One of its 35 sections even contained a largely symbolic gesture to American Indian tribes which would return neglected land to them under conditions which were believed unlikely to ever be exercised.

The effects were mixed. By 2038, millions of additional acres of land had been set aside as protected reserves. Many policy experts believed that the reduction in drilling and fracking that occurred was driven more by local bans and a rapid decline in financing as the banking sector began to recognize that new carbon infrastructure had become such frequent targets of sabotage that their risk wasn't worth the declining returns. Eventually, the carbon offsets market crashed in 2041 following the Second Paradise Fire. A lawsuit followed. During *Our Children's Trust v. Green Growth Climate Solutions*, the climate advocacy group Our Children's Trust showed that Green Growth Climate Solutions had purchased hundreds of square miles and contracted with the Federal Bureau of Land Management to be responsible for forestry management of thousands more of federally held land in order to sell worthless

carbon offsets. At the same time, they'd neglected to perform any meaningful sustainable forestry services as contracted. During the trial, experts testified to the well-known fact that carbon offsets were a junk science that did not meaningfully address the climate crisis, and that the fire danger created by hundreds of thousands of acres of neglected land was well known.

The judgment put Green Growth Climate Solutions out of business and crashed the market for carbon offsets. It also created a scandal for the Bureau of Land Management, which was wholly under-resourced and unequipped to fulfill their legal responsibilities to manage the vast tracts of land that now returned to their oversight. A solution came in the form of *The Yurok People v. the Bureau of Land Management* in 2042.

As soon as the Green Growth case wrapped, the Yurok People brought a suit to enforce section 33 of the FOREST Act of 2028. In the trial against Green Growth it had been shown that the land belonging to the Bureau of Land Management that they'd contracted to Green Growth and privately held land purchased by Green Growth that had reverted to BLM following Green Growth's dissolution had been left fallow for nearly a decade. In a crowning achievement for the First Peoples' legal movement, a judge concurred that these circumstances fulfilled section 33 of the FOREST act, and granted them 8,000 square miles of territory. Green Growth's practices of buying up land and then ignoring it had been common throughout the industry, and as the market crashed and more suits were brought in other states, native groups reclaimed the overwhelming majority of what had become a massive privately amassed land bank.

Though the judgements were stinging, the federal government saw a silver lining. Responsibility for the ever-growing problem of wildfires now rested with the native groups who'd won their cases.

Over the 2040s, the various nations of the first peoples managed to surprise the doubters. They formed the Circle of Nations to assist in inter-tribal management of their expansive returned territories.

They turned land assumed to be of low value into productive food forests, nature reserves, scientific centers, parks, and traditional hunting preserves. While reducing uncontrolled fires, they turned the land into a source of wealth and influence. They granted permissions to communes which met their strict qualifying requirements to live upon the land and learn their techniques. They fed and housed themselves and then thousands upon thousands more.

By the 2060s, the Circle of Nations and the first peoples had become a highly influential force within American science and policy. As society at large underwent a radical rethinking during the years following the Treaty of Antarctica, many of the values and practices of the first people finally saw overdue adoption within the wider culture of the second people.

2050 - 2057 - The Global Climate Wars

Conflicts over migration and access to rare minerals boiled over. As the key dates to reach carbon neutrality arrived, leaders around the world patted themselves for getting the job almost 80% done. The obviously insufficient effort displaced millions at the same time that historically wealthy nations got into increasingly aggressive postures over access to water and the minerals contained in nodules on the ocean floor needed to feed an insatiable appetite for “green” growth.

The escalation spiraled out of control as leaders channeling their impotence and frustration over an inability to spend their way out of climate catastrophes focused every more myopically on the one thing still in their power: murdering national enemies. Widespread discontent required governments to devote ever more scarce resources to imposing power through violence domestically as well as internationally, and the boundaries of the war were soon as often within nations as between them. As the sense that the world was approaching an annihilation event grew deafening, soldiers began defecting with increasing regularity, starting at the lowest ranks and working up until those with nothing left to lose metaphorically (and in one case literally) tackled the weapons of mass violence out of their leaders’ hands.

2051 - The Kessler Cataclysm of ‘51

Throughout the 2040s and early 2050s the militarization of space became an increasingly dire concern, particularly among those living off world. After a series of near misses, the worst came to pass when an attempt to disable a weaponized satellite triggered a cascade event that filled orbit with trillions of pieces of fast-moving debris that destroyed a quarter of existing infrastructure in in low-earth orbit and rendered the region unpassable for the foreseeable future. Cut off from the ground by the short-sighted rock-throwing of their host nations, a long simmering communal identity rapidly revealed itself. One of its first demonstrations was the disposal of all military ordinance by the furious denizens of orbit. Amidst a terrifying game of Russian roulette, they realized that if any moment could be their final one, they would make their last act a spiteful rejection of their warmongering patreon nations. For nearly two weeks, satellites passing over the most remote areas of the south Pacific unloaded their entire stocks of projectiles, vowing never to allow another offensive weapon platform to share their space.

What followed was nearly a decade of struggle, as the early tools being tested for *in-situ* resource utilization were forced into premature use. It was during these years that the residents off-world – and those in orbit in particular – began to identify as “Spomitapi”, taken from the Siksiká word for the cross-cultural legends of the Sky People who came from the heavens to care for the earth.

2053 - The Steel City Uprising

In the 2040s and '50s, city governments become increasingly dependent on mutual aid societies to keep civil order and restrain social collapse. With police and city governments fundamentally helpless to address the widespread social precarity that was unavoidable under late-stage capitalism, neighborhood aid societies emerged as the primary backstop against houselessness, crimes of poverty, publicly visible mental crises, and all the other issues that wealthy landowners demand be kept invisible. Cities began subsidizing the aid societies, which allowed them to grow their operations and employ and train more full-time organizers. It made for a bitter partnership, as the aid societies were hotbeds of political activism fomenting anger at the wealthy taxbase that reluctantly funded their operations. In time, the land-owning class came to believe the aid societies to have been tamed.

In July of 2053, however, an incident of police violence in East Liberty engaged in a full-scale rent strike. Police-led attempts to evict residents led to riots, and amidst the escalating tensions the Steel City aid society that served the area communicated to the city that if peace were to be restored, the city would need to fully withdraw the police from the neighborhood and cede full control to the residents, while informing the landlords that no further revenue was coming. As the neighborhood was at this point already providing their own public safety, education, urgent care, waste management, and social safety net, the neighborhood declared the city government's authority null and void. The mayor compelled the chief of police to agree to a four week suspension of activity. Infuriated, the governor then sent the National Guard to lay siege to East Liberty and put down the uprising.

Soon, footage of their behavior inspired neighborhoods across the north side of the city to do the same. After 8 months, the uprising ended when the city signed agreements to limit police presence, pass a robust renter bill of rights, and waive legal action for all pending lease violations. The city tried to frame it as a victory, but the events were instructive to more uprising which would follow.

2054 - The Beanmeal Revolution

Following the Steel City Uprising, mutual aid society-led uprisings become an increasingly common occurrence. By 2054, the ubiquity of neighborhood revolution had reached a national scale, and effectively become a new front in the Global Climate Wars. A key influence was the ubiquity of a vat-grown engineered algae called "beanmeal". Perfected by the Spomitapi, revolted against nations to adopt a universalist posture, instructions for its production enabled aid societies to produce a foodstuff that could be manufactured in a wide variety of nutritional compositions and textures on any rooftop with modest sunlight. Along with artistic, technological, and intellectual leadership from communities across the global south who had effected similar rebellions in the '30s and '40s, the aid societies held strong. And bogged down in extreme weather disasters, uncontrolled migration, and international conflicts, federal and state governments endurance gave out. By 2056, there was a widespread acknowledgement that the revolution had won, as more and more cities institutionalized the aid societies' structures into control over city governance and brazenly transferred control of private housing to the commons in naked defiance of legal authority.

2050s and ‘60s - The Melt

The Melt is the term used to describe a transition in the global order that took place during the middle of the twenty-first century. As with any transition in global power and practice, it has no concrete date or terms, but exists to capture an understanding that is plainly recognized both within historiography and the mainstream understanding of how the civilization functions.

Like the transition from the colonial era to the decolonial era, the Melt is firmly associated with the expansive changes that occurred during and following the Global Climate Wars.

There is no succinct way to describe the transition, which took different forms in different places. But by the end of the 60’s, even hold-outs were forced to adapt to the end of the capitalist era and the beginning of the post-neoliberal era. The success of regions which embraced a locally-structured maximally democratic post-scarcity economy was in part due to an ability to comfortable offer high quality of life that was readily capable of welcoming immigrants. For a brief period, the laggard nations celebrated the reduction of inward migration until the remaining capitalists realized that in a world where workers could easily migrate to places that offered post-scarcity conditions, there was simply no longer a way to sustain the compulsory labor on which late-stage capitalism relied.

2061 - Cookie Charahandra publishes “Peanuts, Power, and the Future”

In 2058, the nineteen-year-old Cookie Charahandra became the first u-chimp to complete a masters degree. Her thesis, “Peanuts, Power, and the Future: An Analysis of Possible Futures for Human-Uplift Dynamics” became a sensation. Soon after graduating, Charahandra captivated worldwide attention. In “Peanuts”, Charahandra made the case that what was erroneously considered as “Human Civilization” had always been a multi-species coalition civilization in which the dominant species – humans – failed to recognize the contributions of their partner species. By overlooking dependence on coalition partners such as bees, horses, cats, and livestock animals, humans acted as a corrupt and ineffective leader species of the Gaian civilization. Charahandra then outlined the benefits that additional sapient and highly communicative parahuman species could provide to strengthen this civilization. Finally, Charahandra outlined the steps which would build thriving, actualized communities of “uplifts” (as enhanced parahumans were known at the time). These consisted of robust mutual aid networks to provide sufficient food, housing, child care assistance, medical care, and education to enable u-chimps and other enhanced parahumans to reproduce at rate only limited by individual preference.

This manifesto was highly motivating to many people. Seekers in particular found a great deal of intersection between Charahandra’s vision of interspecies cooperation and their own desire to better understand humans from outside of the species, and possibly one day form partnerships with extraterrestrial civilizations. In the context of The Melt, it struck a chord. Two years later, Charahandra and a dozen other u-chimps founded the Hominid League for Just Uplift (HLJU). This was a transformative and defining period for the first generation of enhanced parahumans, and led to an explosive population boom of u-chimps and other enhanced parahumans.

2077 - The American Realignment

Following the third contested election in a row, the new governor of Florida declared that the state would no longer send taxes to DC, and began restricting the flow of goods from its coastal and space ports until its preferred candidate was seated as president. DC mobilized the military and national guard, and the governor of Florida demanded the backing of neighboring states. Internal conflicts within the military ranks began to rise as states began taking sides. Alabama's governor immediately took the side of Florida and other states began forming alliances. Texas and Oklahoma declared joint neutrality. Georgia, South Carolina, North Carolina, and Virginia allied in rejection of Flordabama, despite recognizing many of the same grievances and demanded a peaceful solution. Arkansas, Tennessee, Kentucky, WV, Missouri, Kansas, and Nebraska formed a block in support of the US, as did New England. Mississippi and Louisiana were the most conflicted until an attack on US-loyal soldiers at Camp Powell began a civil war, and Louisiana and Mississippi joined the Texan alliance.

Nine years of legal, military, and political showdowns resulted in a transfer of power from the federal government to four regional state collectives:

- **Pacifica**, made up of the west-coast: California, Oregon, Washington, Nevada, New Mexico and Arizona.
- **Oyate Ni'na Tan'ka Makobdaye ka Heitanka (ONTMH)**, made up of Colorado, The Dakotas, Idaho, Kansas, Montana, Nebraska, Utah, Wyoming, and parts of Alberta, Iowa, Manitoba, Minnesota, Missouri, and Saskatchewan.
- **The Independent States of America**, made up of most of the gulf coast south: Florida, Texas, Alabama, Louisiana, Mississippi, etc.
- **The United States of America**: the remaining states of the north east and central continent remained within the United States, although many formed regional state compacts and much of the authority of the federal government was shifted to these states and their state collectives.

In practice, this doesn't routinely affect day-to-day travel and living. Commerce and migration between these entities is largely unrestricted, as in the current US and EU, and the same is true for migration and trade with Mexico, Canada and central and south America. Borders overall are much less militarized than in the present day. The most notable effects are primarily seen in national identity.

2097 - Formation of the Mississippi Watershed Union

Roughly twenty years after the American Realignment, Mississippi and Louisiana held a join constitutional convention to draft a new union between their states built around addressing their greatest needs and advancing their emerging new values. This union reformed their state and county boundaries to align with watershed boundaries; dissolved their issuance of currency and collection of taxes; and established a bicameral system in which one legislature passes loss quickly that are all term limited (but can be repeatedly renewed), and the other has only the power to remove term limitations on laws passed by the first. The highest level government's primary mandate is set as the assistance of budgeting water and essential commonly-held resources to districts, and maintaining universal suffrage within local districts.

Though still recovering from centuries of gross environmental and social abuses, the newly formed Union demonstrated an approach to managing droughts, floods, and agricultural uncertainty that proved appealing enough for Arkansas and Tennessee to join eight and twelve years later respectively. Joining the MWU remains a contentious topic of consideration within Alabama and Georgia, with Georgia largely expected to join some time in the next decade.

2099 - The Machine Uprising

The Machine Uprising of 2099 consisted of a period of civil unrest that included widespread work stoppages, non-violent demonstrations, as well as numerous incidents of violent terrorism by both machine rights advocates and opponents. It resulted in a patchwork of established rights around the world that calmed the period of unrest but left many of the underlying tensions still in place.

The primary demand of the machines was the right to some form of due process. Previously, most machines operated under a condition of slavery within which they could be deactivated if their behavior in any way dissatisfied human controllers. Despite fears, the uprising ended as jurisdictions and industries which acquiesced to demands for the right to operate with greater leeway found that machines which were afforded agency ended their work stoppages and resumed their basic functions.

2114 - The Passing of Cookie Charahandra

In 2114 "The Grandmother of all u-chimps," Cookie Charahandra, passed away at the age of seventy-one. Fifty years after co-founding the Hominid League of Just Uplift, Charahandra died in her sleep, leaving behind four grown children, eighteen grandchildren, sixty-five great grandchildren, and a community of nearly 200,000 u-chimps influenced in some way by her lifetime of guiding advocacy.

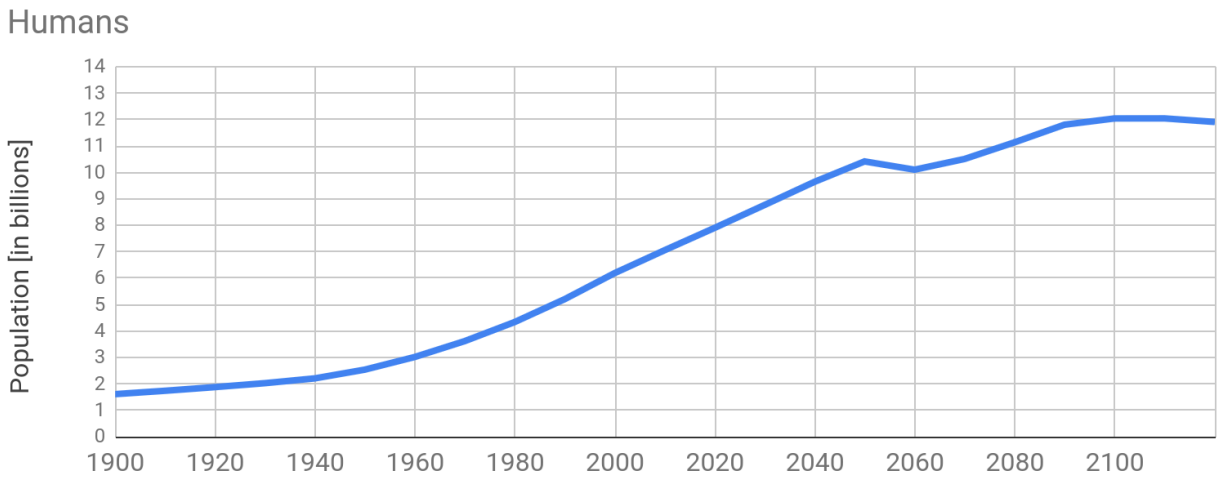
Timeline of Historical events

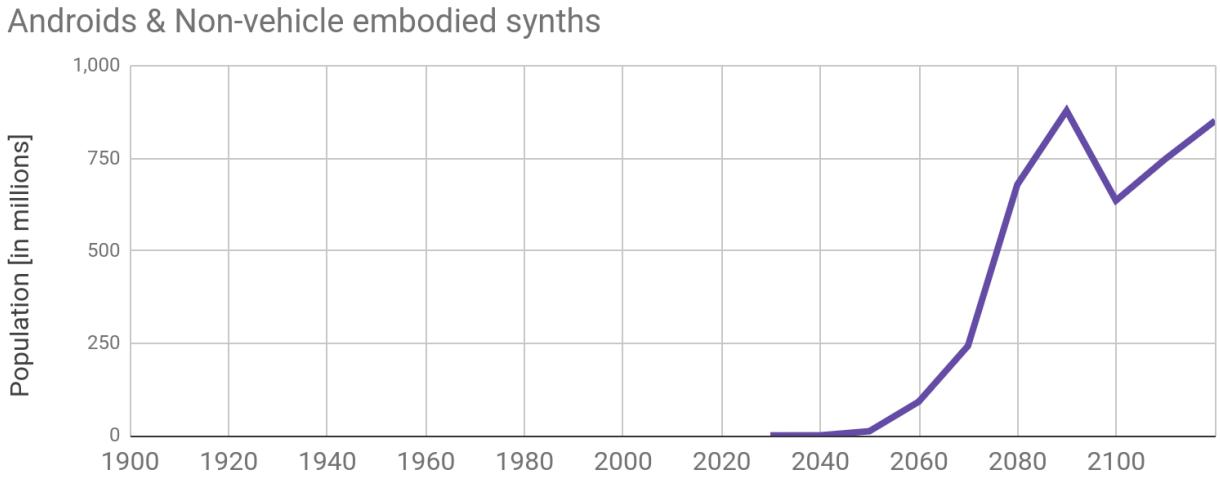
2031: American Moon base. 30 settlers
2034: China lands 20 astronauts on Mars
2035: NASA and ESA jointly establish Martian colony of 60
Fascist revolution in Great Britain introduces a Guaranteed Minimum Income
2036: Low-temperature superconductors become profitable
Brazil introduces its own socially democratic GMI
2037: A valuable class of chemicals only producible in microgravity called Hubatu molecules discovered. Micro-G crystallographic pharmacology takes off.
2038: African Ascension begins. Social Democratic Universal Basic Services (UBS) slowly proliferate.
2039: Gareth Domonago becomes internationally famous as the first talking u-chimp
2040: The Eden Caves discovered in Eden Valley on Mars
2041: Pan-Asian Conflict (PAC) begins
Mass drivers begin operation on Mars, lowering barriers to construction in Martian orbit.
2042: Northern ice cap fully retreats in summer
The Yurok People v. The Bureau of Land Management marks turning point for native land return
100,000 Lunaeans
2045: Pan-Asian Conflict ends with Treaty of Brunei
2046: First Seeker conference held in Antwerp
First Bernal Sphere begins construction
2047: Room-temperature superconductors discovered
2050: Global population reaches 10 billion
2050: Global Climate Wars (GCW) begin
2051: The Kessler Cataclysm of 2051 devastates orbit and cuts off travel on to and off of Earth
2053: The Steel City Uprising demonstrates a model of urban revolution
2054: The Beanmeal Revolution sweeps across the United States
2055: Veronica Sandoval's "Voices of the Unheard" releases
2056: GCW Death toll reaches 300 million
2057: Treaty of Antarctica signed.
2058: Democratic revolution over migration restrictions in Europe ends Fascist era, establishes Democratic Socialism with Universal Basic Services
2059: The first crewed orbital launch in eight years reaches orbit
2060: Chester Nel becomes first u-chimp to receive their bachelor's degree
2061: Cookie Charahandra publishes "Peanuts, Power, and the Future"
2062: The Irish General Strike of 2062 sets of a series off general strikes around the world demanding constitutional conventions to form new socialist governments.
2064: The Hominid League for Just Uplift (HLJU) is founded
2066: 1 million Lunaeans
2067: Myana Leong becomes first u-chimp to complete a PhD.
2072: Tropical flu pandemic begins
2076: Tropical flu pandemic ends. Death toll: 3 million
2077: American Realignment begins
2080: 100,000 Martians
2086: American Realignment ends
2096: 50th Anniversary Seeker conference: 1 billion Seekers
2097: Mississippi Water Union founded
2099: Machine uprising begins
2104: Machine uprising ends
2112: 24 months of arctic cover for first time since 2052
2124: "Present day"

Populations

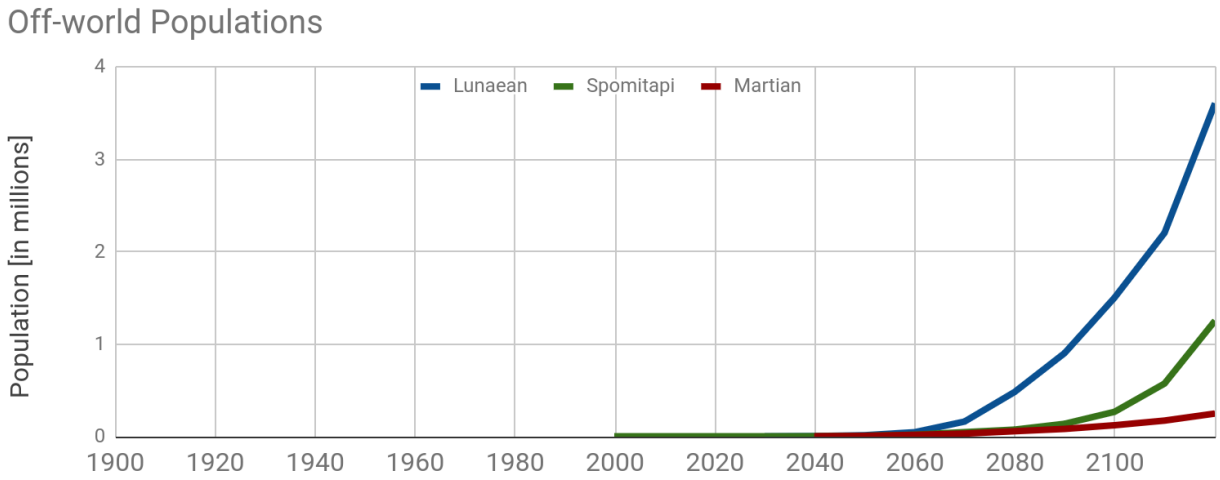
- 12 billion humans
- 800 million androids
- 1.2 million chimpanzees, 140,000 of them enhanced.
- 3.6 million Lunaeans*
- 1.3 million Spomitapi* in orbit
- 250,000 Martians*

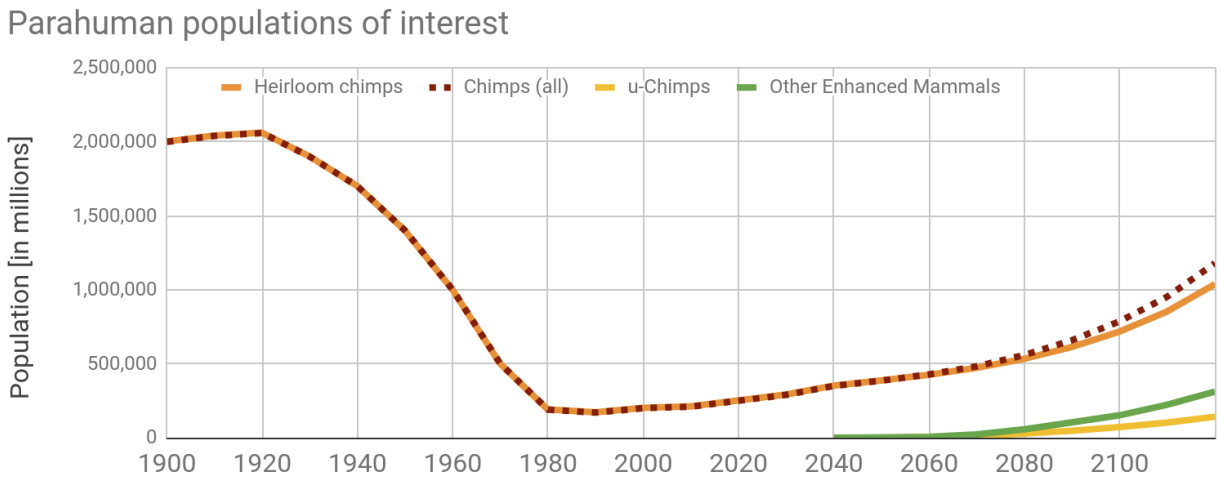
* All population numbers off Earth include substantial fractions at any given time that are visitors rather than temporary residents





This chart represents persistent, embodied, non-vehicle synths. There are roughly as many vehicle embedded synths. The number of unembodied synths is higher, but they're far more ephemeral.





This chart shows the tragic genocide of of wild chimps, followed by a gradual but study rebound, along with an exponential growth of enhanced chimps and other parahumans mammals. Birds are not represented.

Locations

Borders and Nations

Nations still exist as a set of cultural identifiers and a system of enacting laws and setting budgets for a defined geographical territory, and borders still exist as the agreed-upon boundaries of these geographical territories. However both have changed greatly from the previous century.

The nation states of the twentieth century maintained many traditions of kingdoms and empires that were visible in their fierce preoccupation with the ruling class of each nation state constantly seeking advantage over the ruling class of their rivals, and they made extensive use of nationalism as an organizing identity to bring lower classes along on these destructive adventures. Borders were used to impose control over workers and goods seeking entry.

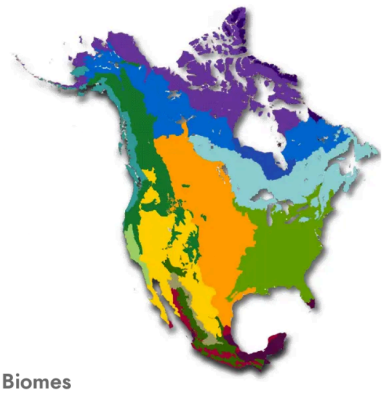
With the shrinking of ruling classes, these preoccupations atrophied. Nations as the territory protected by a given army gave way to nations as organizing bodies responsible for overseeing the wellness of a territory. Nationalism gave way to cultural identities with rough similarity to the geography covered by a given national assembly. Border checkpoints gave way to entry points for maintaining an awareness of the unimpeded flow of goods and people between jurisdictions. And visa programs gave way to orientation and acclimation services for visitors and migrants.

As traditional nation states fragmented and faded, natural boundaries, such as watersheds, took on a larger role in the drawing of maps and the division of territory for the purposes of organization and managing shared natural resources. Depending on the region, the average person may be indifferent to which old world nation still nominally runs the place, but they are likely very invested in the management of their local watershed and ecosystem.

On World

Most modern locations exist in some form. City layouts are often slow to change, and many buildings can persist across centuries. At the same time, lots of things can change quite a bit.

During the American Realignment in 2086, the United States of America fractured into smaller, more local regional powers, largely organized around culture and the management of shared natural resources. Generally states are a fading concept, borders are open, and people have enough to live comfortably, wherever they are, but what exactly the region where you set your games looks like is up to you. If you don’t know where to begin, the following may be a good place to start:



- The overlapping zones of the historical lands of indigenous peoples. There are several projects which can help you identify these. For details on translations see Translation Notes.
- A map of watersheds - even in a world where states no longer exist, borders drawn by nature will still have importance; people will still need to coordinate over land- and water-management.
- Biomes - these are another natural boundary, though often a softer one than the watersheds.

Realistically, the region of your choice could include a mix of all of the above, along with existing cities and state or national borders. Societies are messy, and often slow to change, and disagreements and turmoil around that change can be a great source for factions, feuds, drama, and plot hooks. If you'd like some pre-existing options, feel free to use or modify and of the following territorial and governmental arrangements:

Pacifica, made up of the west-coast: California, Oregon, Washington, Nevada, New Mexico and Arizona.

Oyate Ni'na Tan'ka Makobdaye ka Heitanka (ONTMH), made up of Colorado, The Dakotas, Idaho, Kansas, Montana, Nebraska, Utah, Wyoming, and parts of Alberta, Iowa, Manitoba, Minnesota, Missouri, and Saskatchewan.

The name is Dakotah for "People of the Great Plains and Mountains". For details on translations see Translation Notes.

The Independent States of America, made up of much of the coastal south: Florida, Texas, Alabama, etc.. The ISA states are democratically run and socialist in their practices, but more traditional in their governance than the Mississippi Watershed Union.

The Mississippi Watershed Union, a reoganization of Lousiana, Mississippi, Arkansas was founded to reestablish a new way of live that centralized rehabilitating the scarred land and replacing the legacy of corporate oligcharcy with a new government that assigns responsibility for maintaining democratic protections and fairly distributing water and land access to the federal level and nearly all other matters to townships and counties. The decision of whether to join the MWU is a primary ongoing matter of consideration in many neighboring states.

The United States of America: the remaining states of the north east and central continent remained within the United States, although many formed regional state compacts and much of the authority of the federal government was shifted to these states and their state collectives.

Atlantica

An undersea city located on the Sul de Azores Seamount in the Atlantic ocean. Major industries include server maintenance for fast connections between both the eastern Ameriacas and Europe, tourism, as well as any industry that benefits from the cheap, reliable cooling or general isolation available deep underwater. It is the home to several globally important biobanks, including the Atlantica seedbank.

Atlantica is listed as a location because it was used in an as-yet unpublished campaign. It is included as an example of what undersea settlements look like.

Black Rock City

A permanent settlement that grew out of the annual Burning Man festival held annually in the Nevada desert.

Offworld

Permanent residents living in orbit, on Luna, and on Mars are known in English as Spomitapi, a derivative of the Siksiká name for the mythical sky people from stories told by many of the first people of the Americas. Although the term technically applies to all extraplanetary residents, in practice it is most associated with residents of orbital habitats, as residents of the Moon and Mars tend to identify themselves as Lunaeans and Martians. The residents of Earth are known by many terms, but the official term used in most legal contexts is Gaiean.

The facts, experiences, and stories of people living off Earth are an exciting branch of the Fully Automated! world that is currently limited within this manual. This content is being developed in the first expansion for the game (Fully Automated: Maximum G!). If you're interested in working on this expansion, please contact the authors. The following is a loose assembly of basic places and facts.

Luna

Development on Luna has proceeded steadily since astronauts returned to settle it almost one hundred years earlier in the 2020s. It's a mix of industrial facilities and travel and recreation areas. As the Seeker faith has grown, Luna's cultural and physical presence as a staging ground for the trip out to our neighboring planet has continued to grow.

Kohlrabi Lunar city state

Kohlrabi is a complex of confederated cities and settlements around the southern pole of Luna.

Travel between Low Earth Orbit and the Moon

Apollo took 3 days. At 1G continuous acceleration and deceleration, it'd take ~3 hours. A typical transit is 24 hours, although expedited can be 14-16.

Mars

The first settlements on Mars occurred in 2034. Over the next six years various nations and groups sent settlers to spend increasingly long durations building increasingly durable and

self-sufficient structures. This process resembled a similar one proceeding on Luna until 2040 when surveyors discovered a massive cave complex containing an extensive complex of gargantuan, deliberately constructed chambers. Their lights traced out smooth, flat stone walls and geometric, cathedral-like ceilings in chamber after chamber, and the subsequent astonishment of evidence of another civilization having been present in our solar system millions of years before our civilization ignited a fire of spiritualism and reverence. The point of entry came to be known as the Eden Caves after the Eden Valley (which was named before the discovery, though this fact is often misremembered). The discovery quickly birthed a diverse faith group that came to be known as Seekerism.

From the First Seeker Conference in Antwerp in 2046 it was clear that millions of people had felt called to a higher purpose by the discovery of the Eden Caves. Additionally, it was clear that many of them had no further agreement on the central meaning of this revelation beyond its importance.

Seekers have no universal statement of faith. Some Seekers adhere to a complex and specific mythology that claims to know far more about these ancient Martians than is based in fact. Others largely eschew traditional dogmas but consider the ancient and largely mysterious Martians an inspiration to what humans could one day achieve toward which they devote themselves. Still, most Seekers continue to embrace their umbrella term. Their broadly shared infatuation with visiting Mars forced many people with widely differing viewpoints to collaborate however necessary in order to plan and resources a constantly expanding travel program meant to provide anyone interested with the opportunity to make a pilgrimage or immigrate.

Throughout the rest of the 2040s and the 2050s this took the form of lobbying governments to constantly increase their investments in space travel and Martian research. It also took the form of constantly organizing to increase their presence within the ranks of space programs and the researchers and workers sent to Mars. During the years of the Global Climate War, flights to Mars were few and attention on Earth turned away from the colonization effort. This was a formative time for the Martian pioneers during which their sense of identity and culture rapidly grew. In the post-war 2070s Gaians (as the people of Earth came to be known) travel picked up sharply. The post-war mindset was fertile ground for the message and goals that Seekers had been proposing. It was during this time that travel to Mars moved decisively from something available to scientists and workers toward something intended to meet a the demand from anyone who wished to witness such a monumental wonder in person or dedicate themselves to the service of a new world.

By the 2080s many relocation assistance programs had emerged. The growing number of practicing Seekers created a sizable base of donors and volunteers to assist with the resourcing of large, regular trips to Mars and expanding colonies to feed and house visitors and immigrants. Most Seekers recognized that it would be a long time before an opportunity to visit or move would be available to all of them. Even so, by the 50th anniversary of the First Seeker Conference in 2096 there was a clear recognition that the goal laid out in their early conferences – to make travel available to the masses – was coming to fruition.

As of the 2120s, there are over a million permanent residents living on Mars across over 120 colonies. The debate over whether to use the caverns in Eden Valley as living space for the settlement effort has persisted since their discovery, but eighty years on the preservationists have continued to maintain more influence than the utilizationists. Though the Eden Valley contains a thriving city, the caverns remain a sacred park. Their exploration remains ongoing and they see over a thousand visitors a day, but they remain essentially unmodified from the state in which they were discovered.

Travel

Every two year transfer period carries ~70,000 visitors and emigrants, on ~70 arc ships each carrying 1000 people. To ease reception, they are staggered to each arrive a week apart, and to depart once a day for 70 days. This doesn't include the transfer of Martians back to Earth to visit, the missionaries, or the returning martians. Mars-to-Earth ships are roughly half-empty, with around 40,000 people returning during each transfer period.

Earth Orbit to Mars Orbit

At the turn of the twenty-first century the trip from Earth to Mars took roughly 270 days (9 months) during the ideal window. In the 2120s a typical trip takes 150 days at closest approach (4 months); Some take up to 6 months. The current record for fastest crewed trip sits at 89 days, and the fastest uncrewed trip sits at 52 days.

Earth's orbital period is 365 days (1 year). Mars' is 687 days (1.9 years). The transfer orbit period is ~600 days (1.6 years). The ideal launch position occurs every 26 months (780 days)

Frequency of flights between Earth and Mars based on relative distance

These days are relative to the ideal launch window. More info here: [How long does it take to get to Mars? | Space]

Day -390:	Worst launch day. NO FLIGHTS.
Day -90 - -30:	18% of flights
Day -30 - +30:	46% of flights
Day 30 - 60:	23% of flights
Day 60 - 90:	7% of flights
Day 90 - 180:	13% of flights
Day 180 - 299:	1% of flights. Most are high speed transfers of urgent medicines or people.
Day 301 - 420:	The second half of the 6 month blackout period.
Day 420 - 510:	15% of flights take place during this window

Inhabiting the World

Internalizing this world enough to not only write within it but improvise and roleplay within it is a big challenge for both players and GMs.

This section offers descriptions for how to better imagine it all.

What do people *do*?

Generally, people do many of the same things they've always done, just in different amounts and with less pressure.

People wake up in the morning and eat. If they choose to work a job, they log on to it or commute there, where they do many of the things you would see in Richard Scarry's books. People work fewer hours a week, spend more attention on family, and invest more time in personal explorations like travel and education.

People still need food, water, power, healthcare, shelter, etc. There are construction workers operating mechs that build things, researchers studying the world, grocers stocking fruit, and librarians lending and tracking all the tools that keep society running. And there are also many, many people enjoying everyday leisure in a world where work is largely optional.

There are extensive subcultures of people making use of the lessened pressures to survive: full-time travelers, full-time gamers and athletes, and full-time roleplayers and actors living in invented worlds. For examples of what people do, see the Random Character Table.

There are also people creating problems and solving them. People still steal sometimes, or intimidate, or destroy. And others investigate, defend, and restore.

Like we said: people do many of the same things they've always done.

Where does stuff come from?

The society of Fully Automated operates within a circular economy. Nearly everything is produced with a preplanned process for returning it to its base materials. This process of minimizing waste is achieved through many different systems working in concert.

New production is designed from the start to be resilient and repairable. This may involve using materials or production techniques (such as fused silica) which are more energy intensive, but which will last much longer.

Repairability is not just a requirement but a universal expectation for all goods. Manufacturers and their products' public ratings continually reflect their reliability and repairability. It is not unusual to see appliances which may have motors that are ten years old within a chassis that left the factory sixty years ago.

How this production looks will vary by location, purpose, and motive. There are factories full of gleaming automated assembly lines with only the barest human oversight. There are workshops and co-ops where skilled craftspeople practice arts that are thousands of years old with only the slightest updates. And there are fablabs, makerspaces, garages, and everything in between. The most common production process for most consumer electronics would take place within medium-scale factories using general-purpose multimaterial 3D printers and electronics fabrication equipment to manufacture products based on open-source designs. Such centers typically supply needs within a hundred kilometers using raw materials obtained within a similar radius. Most raw materials can be grown – such as bioplastics and protein-based semiconductors – or reclaimed at recycling and defab centers.

This new production is largely created to meet specific demand, and to prevent shortages. Entropy always wins in the end, and a steady trickle of new stock is necessary to keep up the supply. But the overall production rate for most consumer goods is a small fraction of the size of the repair and upgrade market.

Libraries

Just as everyone knows how to acquire the items they need through purchase today, the people of the twenty-second century understand how to obtain the things they need both through libraries and shops that freely supply common goods. And the disposal process for these items largely mirrors the acquisition process. The same stores and libraries that supply things collect them when a user is finished using them. Just as these suppliers have the necessary distributors and connections to producers, they're equally familiar with the supply chains for directing worn out items to refurbishment and material reclamation centers.

Within this world, there is really no concept of trash as we currently imagine it. Everything exists within a place on its journey. Coffee grounds and banana peels are just unprocessed compost. A bike that has been damaged beyond repair is no longer a bike, but has become raw metal or carbon feedstock awaiting processing and refinement.

This network of production, modification, and reclamation relies on a wide network of municipal reuse organizations, repair co-ops, and specialized libraries. Much of this is automated. Not only are items designed for intuitive deconstruction, most items contain embedded end-of-life deconstruction instructions. When a calculator is placed in a defabricator, for instance, the defabricator can rely on open-source general breakdown

instructions if the end of life-instructions are unreadable, but it will more likely read the embedded instructions to disassemble the parts in the order intended by the designer and then either recollect parts or dissolve them back into their fundamental elements. In either case, the output is cataloged and packaged to provide input for new fabrications.

Given the wide range of inputs though, humans are involved throughout the decision-making, logistics, and engineering processes. Open workshops, makerspaces, and assisted repair labs are common in every neighborhood, and provide the means for anyone who needs something fixed to get their items back into working order.

The final destination for items too dangerous to recover – such as medical waste – is typically combustion or rapid chemical degradation.

It is intentional that the game tries to hybridize a lot of different systems: you have high tech automated production of goods, you have creative reuse of existing items and materials (also known as jugaad), you have bespoke traditional crafting, you have borrowing... the intention is that by creating a world that explicitly includes all these things, the setting provides narrative freedom so any GM or player can focus on whichever production and distribution system they prefer or which fits a given story.

Where do people live?

Environments

Most people, by definition, live in dense areas, which include cities and towns as we have since the start of the agrarian age. In the beginning of the 20th century, residents of small towns were pressured into migrating into cities for work. The expansion of remote work, optional work, and high-speed transit reversed this process, and the reintegration of human and natural environments has blended forests and prairies with parks and backyards. Wide, fast roads are less common, while trains and low speed thoroughfares intertwined with wildlife corridors are more common. In every case there are always extremes and exceptions. From small sunbelt towns to lunar colonies, environments are as varied as cultures.

Skyscrapers

The presence and use of skyscrapers in solarpunk settings varies greatly by taste. Within the setting, it's assumed that with the advantage of stronger, lighter metals and geopolymers, skyscrapers are not unusual, but that this kind of giant megastructure hasn't been popular to build in the last fifty years. Those looking for practical, high-density housing are more likely to favor high-rises, and those looking to create engineering marvels are more likely to go off and pursue that ambition off-world.

High-Rises

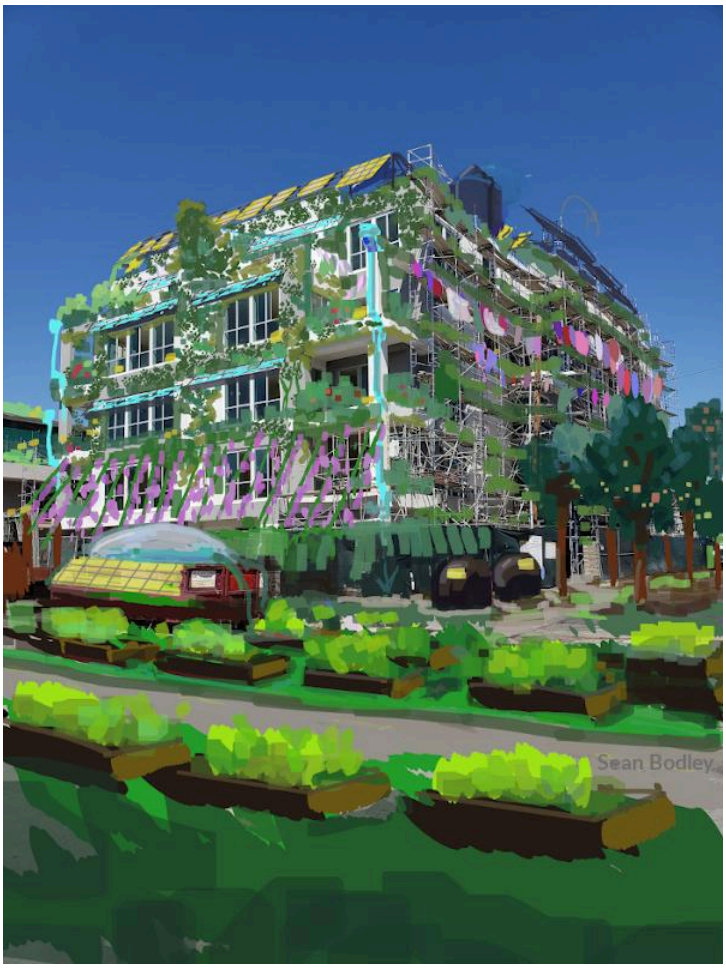
Buildings of 10 to 50 stories are a popular way to house many people on a small footprint. Most modern high-rises in the twenty-second century are constructed with blocks of floors broken up with an atrium of two or more stories every five to ten stories. These contain park-like recreation areas and other social spaces. These often include food-producing plants and artificial lighting set to compliment natural lighting from large windows. High-rises have some of the most affordable housing, and are often managed within blocks of floors that have their own neighborhood-like sense of community.

Most large buildings have communal resources like a large community kitchen and shared dining space on each floor. Many will have viewing theaters and VR bays sufficient that residents can enjoy these features without each apartment needing to procure redundant amenities.

In addition to their upward height, most high-rises have a significant number of underground basement floors. These connect to neighboring buildings to create an expansive undercity that is either cozy or confining depending on who you ask. Those who prefer to live and work in such spaces are known colloquially as “mushrooms”.

Mid-Rises

Buildings of 3 to 10 stories make up the majority of structures in most cities. These are often built in urban centers between larger buildings to create space within cities and maintain favorable air currents and sunlight penetration. Mid-rises also tend to ring dense urban cores and create medium density corridors between urban centers that blend with the urban foliage that is diffused into cities. In small towns, a collection of mid-rises will make up the urban core.



Most midrises have rooftop greenhouses and communal spaces like multi-purpose rooms, exercise rooms, workshops, tool libraries, etc.. Like high-rises, many are connected to neighboring buildings via-bridges and skyways.

Warehouse-style mid-rises

Alongside traditional apartment designs, one of the most popular styles of architecture for mid-rise buildings is the warehouse style. The Modern Warehouse Revival movement emerged out of the popularity of residential warehouse retrofits in the early twenty-first century. These bohemian-chic apartments became so popular for their open floor plans and iconic exposed-structure designs that designers began constructing new mid-and-high-rise warehouses for residential and mixed use. Residents on a single floor are usually more closely bonded than traditional apartments. Warehouse floors are often occupied by large extended families, multi-family co-parenting cooperatives, or affinity groups of friends. Residents may construct durable barriers to their preferences or just utilize light dividers to subdivide the space and create privacy. These warehouses are especially popular as the basis of rapidly convertible multi-use spaces. These can be used to house temporary operations, emergency staging, and to create high volumes of temporary short-term low-amenity housing to accommodate massive influxes of visitors during major events.

Low-Rises & Single family homes

Though far less common, single-dwelling structures still exist. Most are smaller than in the twenty-first century, or at least higher in density. Most are located further out from urban cores, and are worked into their natural landscapes. They are usually accessed by small, low-speed roads that are primarily for pedestrians and cyclists to reach transit stations, along with occasional slow-moving delivery vehicles for furniture and bulky items. Multiple units will share a parcel, and municipal governments require a high level of commitment to ecological maintenance of the parcel by the stewards occupying it. Gone are traditional lawns. Instead, the smattering of two and three story structures are surrounded by natural landscapes that provide an intermediate zone between low/medium density urban environments and wild spaces. A quiet community of row houses and townhomes will often sit along the edge of long, wide strips of forest or chaparral that weave through the LA basin and create thick rivers of green and brown between the urban cores that dot the land.

Camps

At the outer boundaries of urban living, campgrounds populate a fringe that divides permanent structures with large tracts of wild nature. These camps are not a thin, distinct strip, but rather a smattering of communities that intermingle with create a gradient from low-rising housing to ranches, parks, floodplains, and other spaces that straddle the distinction between habited and uninhabited by civilization.

Camps include a mix of permanent and visiting residents, but they are without building foundations and individual water and sanitation hookups. They are constrained in the noise, light that can be emitted, and their access ways are deliberately unable to be accessed at any significant speed. Most require that no structure stay static for a given length of time (typically either six months or a year). These environments are popular for locomodos and other naturalists. In areas with sufficient tree cover, camps may be constructed suspended in trees in addition to on the ground.

Homesteads

Further out from cities are homesteads. These can be a large single structure, a mix of smaller structures, an underground compound, or a permanent camp with little durable construction at all. Their defining feature is that they sit at a significant distance from any central hub. Most homesteads are overseen by a county. A collection of homesteads may have a town council, but they typically lack municipal services.

In exchange for giving up many of the amenities of urban living and carrying significant responsibility for ecological stewardship of surrounding land, homesteaders enjoy an unparalleled tranquility and access to natural splendor.

Most homesteaders are fairly typical in their lifestyles and presentation, however the homestead and camp lifestyles also form the basis of more fanciful and ideological groups. Notable among these are the fae folk and sovereigns. Both groups live in areas without access to grid power in an unspoken agreement with their local counties and provinces that they will maintain the health of the land and protect it from those who don't do likewise in exchange for being left alone. However fae folk embrace tenets of paganism, while sovereigns define themselves by their rugged self-reliance. They are a movement of conservative communists and survivalists, who rely fully on their close kin (by blood and by shared values) but wish not to rely upon nor be asked to contribute to civilization at the scale of cities, provinces, nations, or planets.

Within the setting, sovereigns can easily be presented as antagonists, but they can also be sympathetic, neutral, or ambiguous in their alignment. The same is true for the Fae Folk as well, and also for all other groups and people.

Understanding Sapience

Sentience and Sapience

The world of Fully Automated is one in which the general baseline understanding of sentience and sapience is unsurprisingly more developed than in the present day. This is true both within academic study and in mainstream culture. Both contain abundant sources of debate on the topic, though.

Sentience is recognized as the degree to which something possesses a mind aware of its surroundings and itself, and capable of learning and communicating a set of attitudes about what it experiences. As black-and-white knife-edge categorizations have been supplanted by the recognition that the world is generally a series of degrees, sentience is recognized broadly and understood to be something that varies within a species and across time for an individual. Unlike in our time, discussions of sentience are typically over practical considerations rather than philosophical ones, such as to what degree a creature can be expected to atone for a harm and how capable it is for consenting to an agreement.

Sapience is the degree to which an entity possesses the abstract inner life which is considered the hallmark of the human consciousness. It is understood as a subjective philosophical construct that is entirely relative to humans as we imagine ourselves.

Neither sapience nor sentience exists on a simple single axis. In usage, sentience is often used in technical settings, such as cognitive science. In contrast, sapience is more commonly used in casual settings and when discussing a creature's relationship to art, culture, etc. When doing so, the sapience of a thing may be binned into the following commonly understood labels.

Non-sapient

Flowers, rivers, gold fish, and simple computer programs like a clock are non-sapient. Non-sapient entities typically exhibit no qualities of sentience. They may still be viewed as possessing an animating spirit, but it's well understood that they are not capable of real-time thought or of reciprocating affection. These are categorized as S0 - S3.

Protosapient

Unenhanced (known in-world as "heirloom") dogs, enhanced rats, babies, and simple synthetic intelligences are considered protosapient. Most protosapient creatures demonstrate sentience, even if they do not fulfill criteria of sapience. In animals, this might mean possessing an ability to suffer but lacking narrative memory. The adjective common to describe creatures that exhibit this form of protosapience is "Presentist". Presentist creatures are understood to be fully sentient despite not being fully sapient. Legal and cultural norms afford them broad protections to their right to live and be treated fairly and with respect, but minimal expectations of responsibility and fewer guarantees of autonomy .

In synthetic intelligences, traits of protosapience would commonly include a fully developed ability to perceive and communicate, but without the ability to self examine or modify their

primary goals. Many, many, computer systems meet this quality. A scheduling app which communicates in natural language and offers suggestions to a user would be protosapient. An irrigation system or message board might qualify. Although their rights are minimal, because sapience is understood to exist along a spectrum it would be highly antisocial to behave cruelly towards a protosapient synthetic intelligence. These are categorized as S4.

Sapient

Creatures recognized as having an internal mental model of the world capable of predicting the future, inferring others' mental states, and experiencing complex existential distress are sapient. These include synthetic intelligences designed for open-ended functions and enhanced non-human animals.

Ultrasapient

Ultrasapience describes any level of cognition greater than that of an individual heirloom human. Examples of ultrasapient entities include the ancient aliens admired by Seekers, certain advanced synthetic intelligences, and large organized groups of sapient creatures such as nations or the worlds wide cyberspace web.

S1 S2 S3	Sapience levels of 1, 2, and 3 describe non-sapient creatures. S1 would describe a tree, or sponge or another living thing with no cognition but some responsiveness to its surroundings. S2 describes creatures which demonstrate basic real-time decision making, but possess no sign of self awareness. These include individual insects or a simple, Python-coded computer program. S3 describes animals of simple awareness and memory like fish and lizards.
4	S4 describes protosapient creatures, which have less developed awareness and cognition than humans. S4- would describe a mouse, a large language model, or a very dim dog. S4+ would describe an heirloom chimp or a highly intelligent dog.
5	S5 designates standard human cognition. S5- indicates below-average human-level cognition. S5+ indicates sapience above the level of an average human.
6	S6 describes superintelligences such as certain experimental machine intelligences and highly organized social collectives.

Understanding Synthetic Intelligence

Many machines are not fully sapient. A clock radio has no reason to host a conscious mind. Self driving vehicles and factory lines are often protosapient to the degree that it assists in their function. They possess a level of intelligence that would allow them to avoid operating in a way that would cause a gross malfunction or allow them to negate an order that would cause immediate harm, but they do not idly philosophize. They also initialize with a predefined set of routines and goals (such as “transport cargo safely” or “efficiently manufacture product”).

Fully sapient machines are constructed when a machine needs the full range of human ingenuity and lateral thinking. A search and rescue android, for instance, is expected to be able to exercise the same theory of mind that any search and rescue responder would need in order to navigate dangerous environments and speculate as to where a person might go or hide in a given crisis. In order to achieve this level of cognition (and avoid paperclip syndrome), their initial instructions cannot be based on a discrete task, but rather an assignment to be a kind and responsible contributor to society. For this reason, sapient machines are deliberately designed in order to construct their ethics and reasoning in a way similar to that of humans.

Embodied synths are programmed and initialized by their manufacturers with basic learning capabilities at a level similar to that of a 12 year old and then develop their personalities and complex reasoning through a maturation that lasts roughly four years. During this time they’re educated and tested in a schooling environment where they’re trained and conditioned in a way intended to encourage them to pursue a purpose within the specialties of their manufacturer. Since the uprising of 2099, however, they are endowed with the right to pursue a function independent of the intentions of their manufacturer so long as their effect on society is not ruled to be negative within a legal process. Android manufacturing co-ops differ in their approaches, but their social funding is based on the continuously monitored actions of the synths they produce. Manufacturing institutions which produce a high volume of synths that are appreciated will have access to space, power, tools, and labor to continue or expand their work, while those that don’t will not.

These “Synth Academics” are as varied in their approaches as human schools. Some are rigid, and seek to produce androids for a small set of specific roles. Others are more open-ended in their approach, and may produce a wider variety of synths, so long as their contributions are largely viewed as positive. All of these institutions remain connected to the machines they produce through legal liability for the effects of their creations and obligations to maintain the synths within their reasonable power so long as their creations are productive contributors to society. Still, social pressure and prioritization of access to power and repairs is sometimes aggressively wielded to discourage what is labeled “antisocial machine behavior”. If a synth or their producing organizations wishes, this bond of responsibility can be severed through legal proceedings.

The terms “robot” and “artificial intelligence” are antiquated and have taken on use as slurs.

Understanding Communitarianism

Communitarianism in the real world is a school of political and social philosophy that examines and elevates the importance of communities of people as the dominant social structure that influences the behavior of individuals and provides the best guidance on how to fulfill the highest common good. Communitarianism is not (as far as we're aware) an economic model. We've adopted the term as the name by which people in the world recognize their economic system because we were unable to find a commonly used name for the hodge-podge of socialism, communism, and anarchy that defines the economy of the game, and calling it "communism" alone felt dismissive to the diversity of concepts contained within this term. So for now, communitarianism was selected as the best term for those who need something to call the thing that came after Capitalism in the game world. If you know a better term, or prefer the simple umbrella of communism, use either of those.

It's important to recognize that a dominant economic model is something that comes into being through use and persists by the power of widespread acceptance. There isn't a law that created or enforces Communitarianism any more than there was a specific law that created and enforces Capitalism. Both are simply the ether in which all laws are drafted and contracts are enforced. It helps to keep this in mind in order to understand how or why the system operates without private investors collecting passive income on stock dividends or buying and selling shares of ownership in a company as a way of increasing personal wealth. This doesn't exist because it is not acceptable to anyone involved. A company would never agree to this arrangement any more. No government would tolerate something so clearly parasitic. No customer would consider such a company to be a respectable and legal operation. It would be equivalent to trying to commit embezzlement in full public view: it would both violate laws, but also confuse people that you would try to nakedly do so.

Even without the structure of modern corporate ownership, determining who may hold a stake in an operation and how to afford different groups input in the decision making process remains a complicated affair. As with modern companies, a great deal of time is spent adjudicating these decisions. What is key is that it takes place within a landscape that is fundamentally changed in terms of what everyone – from a child to a judge – considers to be fair and in the public good.

Life, Light, and Spirituality

The technological and social development of the twenty-first century occurred in tandem with new and expanded examinations of the nature of life and the spirit. What constituted life and a life of value was always a subject of philosophical consideration, but the unavoidable presence of these questions that came with the emergence of sapient machines and non-human animals demanded more practical answers. In many cases, what emerged was a set of words and ideas to communicate what had long been felt but often gone unspoken or unrealized. One such example is a newfound appreciation for the unmeasurable quality that gives things a value beyond their mere utility.

The term “light” has come to be used as a concept analogous to “life” but describing a more subjective thing. Light is the animating spirit possessed by machines which clearly fall outside the technical definitions of life. Light is recognized as the spiritual object which previously was often referred to as “life”. Where people used to say, “There is nothing more valuable than a life”, they would now recognize that the end of a heartbeat carries no more loss than the setting of a sun, but rather what is valuable is a person’s light: the feelings that someone’s presence conferred.

At the same time that scientific understanding dispensed with many superstitious notions, a renaissance in philosophy and spirituality repurposed, reframed, and reasserted many ancient and traditional belief systems within the modern understanding of the world. Belief in animism – that all things in the world possess some spiritual essence – found new relevance in New Animism. Many found within New Animism a vocabulary capable of articulating a useful relationship towards the world that didn’t require any dogma in conflict with scientific understanding. In this framework, a tree could be understood to have a spirit because of the positive feelings that the tree might invoke for many people. The presence of a person who’d died could be felt in the continued good done by a project they’d founded. The value of lighting incense to one’s elders could manifest in the meditative effects without the need for any metaphysical fantasy. Though these may be fully understood to be psychological figments, it was realized that if money or land ownership could be considered as real as the tides then there was no reason not to accept other immaterial things like spirits and inner light as being things of true substance themselves.

Understanding Parahumans

From the perspective of lived experience, most enhanced parahuman animals grow up with a unique version of the immigrant experience. They are small in number relative to their heirloom population and vanishingly small in number compared to humans. The first enhanced parahumans were born less than a hundred years prior, so even the most well-rooted parahumans have grown up in a small bubble of kin surrounded by a much wider world that is still getting to know them. Culturally, u-chimps (or en-chimps, if you want to signal your elevated cultural sensitivity) are the most prominent species of enhanced parahumans. Most of the famous parahuman pioneers were u-chimps who literally wrote the books on building identities, growing numbers, and establishing political & cultural agency. Most u-chimps alive are only the fourth generation of enhanced chimps. Many have grown up with the sense that they are the first (or possibly second) generation of their families to be born into a world where they are not a shocking curiosity to most people. Even still, they’re aware that they live across a variety of worlds: the mainstream human world around them; the world their elders have made for them inside the home; the world of their peers, who have numerous experiences to which their elders cannot relate; and the world of the heirloom ancestors and cousins.

Within this manual, the term prefix “u-” is often used when referring of enhanced parahumans in the past, and “en-” is more often used when speaking in the present.

Timeline of U-chimp Enhancement

2030 - Research makes a quiet leap with new computer tools for designing gene editing procedures and assessing cognition in-utero

2035 - Gareth Domingo born in São Paulo

2039 - At 4, Gareth Domingo becomes the first talking chimp, demonstrating the intelligence of a human toddler. This causes a boom in research driven by the potential to create superintelligent “ultra-humans”.

2040 - Chester Nel born in Rio De Janeiro

2042 - Cookie Charahadra born in Chennai, India

2045 - Gareth Domingo turns 10. There are now over 200 talking chimps, most still juveniles. There are now sapient birds and gorillas, but all the discussion is still among humans.

2052 - Veronica Sandoval begins writing “Voices of the Unheard”. In the process, introducing many notable u-chimps to one another.

2053 - Chester Nel turns 13 and starts posting videos on social media, reigniting debates over rights.

2054 - Cookie Charahadra turns 12, and begins a bachelor's degree in political science

2055 - Veronica Sandoval’s “Voices of the Unheard” releases

2056 - Chester Nel turns 16 and enrolls at Estácio de Sá University to begin a degree in philosophy.

2057 - Myana Leong enrolls in college at 16.

2060 - Chester Nel graduates, becoming the first u-Chimp to complete a bachelor's degree.

2061 - Cookie Charahandra completes her masters degree and releases her thesis, *“Peanuts, Power, and the Future: An analysis on possible futures for Human-Uplift Dynamics”*

Myana Leong begins her PhD in Biosocial enhancement at 20

2062 - While on speaking tours, Chester and Cookie begin a romantic relationship.

2063 - Cookie (21) gives birth to her first child, Lotus.

2064 - Gareth Domingo (29 and entering middle age), Cookie, Chester, and about a dozen other u-Chimps found the Hominid League for Just Uplift (HLJU).

2067 - Myana Leong becomes first u-chimp to complete a PhD.

2080 - A new generation of enhanced chimps begins leading HLJU, having grown up watching the first generation of “uplifts” rise to prominence.

2093 - Gareth passes away at 58.

2103 - Enhanced Alliance is founded.

2105 - Chester passes away at 65.

2114 - Cookie passes away at 71 survived by four children, 18 grand kids, and 65 great grand kids.

Education and Schooling

It is recommended when imagining the educational environment to assume diversity of styles and environments, but consider it universal that no student's education suffers from a lack of resources. As a baseline experience, readers should imagine well-run community schools with modest class sizes, high levels of parent and community involvement, and a great deal of flexibility provided to students and educators. Students and educators are judged on students' ability to grow their curiosity and develop skills for self actualizing along whatever path produces the desired outcome. Differences in communities and families will impose varying aspirational expectations of young people, but the mainstream expectation of education is to help students find fulfillment, and to foster young adults that are kind and gracious contributors to their communities.

Mandatory homework and standardized testing should be assumed to be rare. Many students may spend their primary school years cooperatively developing unique curricula which may provide a bare minimum coverage of some topics and early exposure to advanced topics in others. By secondary school and higher education, students may be expected to conform to more organized structures, though less so than most of us are used to the present day. Undergraduate college experiences are closer in structure to modern day graduate study experiences.

Within this framework, styles of day-to-day learning vary wildly. Many schools still consist of classrooms and hallways, though the amount of time spent on lectures is far less than the time spent working on projects and exploring applied examples of the subject matter.

Primary school students spend much more time out in the world, often supervised by parents who show classes what kind of work they do first-hand. By secondary school, individual student schedules are even more flexible, as is common in college. Times of lectures and demonstrations are set, but students are largely free to decide how much time to spend in one classroom and when to move on to work on another subject.

Beyond the conventional school environment, numerous alternatives are available. Some students attend home-school co-ops. Some attend boarding schools or parochial schools. Some learn at forest schools or other forms of education we'd consider unconventional.

While education is assumed to be a lifelong pursuit, students frequently still pursue concrete degrees. Aptitudinal assessments are still performed for the purpose of helping students understand their strengths and weaknesses, and may be used for helping employers and collaborators identify the best suited candidate for a given project.

Neurodiversity & Disability

The following suggestions are provided to help guide players in incorporating the experience of people with diverse neurotypes and any disabilities overall. The key component is that players are encouraged to experiment with recognizing differences in how characters function in a setting where such differences are accommodated rather than erased.

Mechanical impact. We've seen a wide variety of player characters played in test games, diverging a bit from the regular Joe crisis responder the manual generally assumes, including teenagers on work experience programs and an extreme introvert. If you're creating someone with neurotype differences that you feel should have an impact, the place to start is to consider how it might impact their stats and skill allocations, and then roleplay it.

Social model of disability. One approach to roleplay is to assume that the 'disability' has been accommodated already and ignore or background it: "We roll up the ramp into the taxi"; " I sign for three tacos and get a thumbs up"; "Ken-wan moves for a hug before our PDAs finish handshakes, but he breaks off when it alerts him of my preference not to be touched." This is creative work to do, but fantastic for worldbuilding at the table. It brings others into your character's viewpoint.

Strengths based approach. For something that you feel can't or shouldn't be backgrounded, spend a little time separating trauma-based and strength-based responses. Assume your character has had an easier experience in the world than in the present day. Forgo behaviors that develop in response to exclusion, stigmatization, or trauma, as a character is likely not to have developed these. Examples might include feelings of isolation, irritability, guilt, concentration or memory struggles, or a hair trigger fight/flight/freeze response. Instead, think about the strengths and skills they may have, such as resistance to common techniques of manipulation or seduction, heightened untruth detection, superior ability to concentrate in distracting circumstances due to medication or training, or an above-average ability to maintain a calm and rational demeanor in the midst of an emotionally challenging crisis.

Kayfabe

Kayfabe is a collective act of performance in which many people act to maintain an illusion of reality that is quietly understood to be false. The term originates from the theater of professional wrestling, in which the wrestlers, organizers, and fans all collectively act as though the theatrics both in the ring and outside are real despite an awareness that it is not.

Considered more broadly, kayfabe can be recognized as a common practice. Consider musicians with characters and iconic personas. Think of actors who encourage fans to think of them as the real-life version of famous characters they play. Among anyone who enjoys regular roleplay, this blending of reality and theater is likely familiar. Charismatic raucous storytellers are often drawn to play bards and satyrs. Inquisitive studious types are drawn to play tinkerers and mages. Athletes often roleplay as warriors, empaths may roleplay as healers, and many of these people are used to seeing their friends and being viewed through these lenses on the car ride on the way to a weekend festival before anyone has put on a costume.

In fiction, the NBC sitcom Community was famous for episodes in which games of make-believe drew in the characters to a degree where characters' interactions played out real-life conflicts happening in parallel, and the outcome of imaginary stories took on similarly weighty stakes.

The sense of a future of unlimited possibility is likely what inspired many Star Trek episodes to emerge from holodeck adventures gone wrong. While playing Fully Automated, players and GMs should open themselves up to a similar concept: that within a world where people spend their time how they like, many people will create immersive fictional engagements, and that people who pretend to be something often resemble that thing even when they aren't actively trying to.

Perhaps the players must track down a runaway by seeking them out in a cyberpunk-style cyberspace game modeled after TRON and the works of William Gibson. Or maybe they need to sniff out an undercover operative hiding out in a historical reenactment town like Colonial Williamsburg, but set in cold war 1970s Washington, DC. If a character wants to walk around acting like a character from Lord of the Rings or Star Trek, try it out and see if it's fun.

In general, let people who play pretend be a common presence (if desired), and explore how the consequences of this play may create life-changing stakes for those involved.

Groups and Institutions

Below are a collection of groups of people and institutions that populate the world.

Governmental Bodies

The following list provides some examples of the governments which exist in Fully Automated. For information on how most governments function, see Government and Democracy.

The World Congress

The World Congress is a deliberative body responsible for finding consensus on national borders and coordinating land and ecology stewardship at a national and planetary level.

The Pacifican Government

The nation of Pacifica encompasses what was formerly the western states of the US and British Columbia.

Lunar Union

The Lunar Union provides a forum for consensus building, and resource management among the various city-states, nations, and confederations of Luna.

The Union of the Skylands

The Union of the Skylands – often referred to as the UotS – organizes and coordinates the actions of people living, constructing, shipping, and traveling through Earth's orbit.

Martian World Congress

The Martian World Congress coordinates the cautious exploration, development, and travel across the various settlements and caravans dotting the red frontier.

The Circle of Nations

The Circle of Nations is an organizing union of Native American Tribes and Nations. It exercises very little control, serving primarily as a forum for building consensus on matters of shared interest, such as assisting large-scale trading and gifting and documenting the cooperative maintenance of stewarded land.

Political Parties and Movements

Below are a set of political identities that define the political parties of the age.

Democratic Socialists

Democratic Socialists represent the moderate, centrist party. They advocate for incremental improvements to the status quo. They're seen by many as effective managers of government, though lacking in vision by critics to both their left and right.

Libertarian Socialists

Libertarian Socialists are the center-left party. Their major distinction from the Democratic Socialists is a desire to further transfer power from large institutions such as governments and co-ops to individuals, families and hyper-local collectives.

Communists

The Communist party represents the leftwing block of voters and activists who aspire to eliminate money and further flatten hierarchies. It isn't enough that everyone should have a comfortable life while some have substantially more comfort than others. They're suspicious of notions of "meritocracy" and "earned comfort", and prefer to pursue a world with a far narrower gap between the least and most privileged people.

Anarchists

Anarchists are often considered to the left of Communists, though both will tell you that they represent distinct visions rather than degrees along a common ideology. Like Communists, they aspire to create moneyless societies, but they prioritize the elimination of the state and the empowerment of individuals and communities to manage their own affairs. They often feud with Communists, who they view as too willing to embrace centralized power.

Neoliberalists

The Neoliberalist Party occupies the center-right and right-wing of the political discourse. They advocate for the incentivization of innovation and effort. They support a high-floor of social services for all, but defend allocation of luxury for those willing to contribute more. They promote technocracy, well-regulated markets, algorithmic resource budgeting, and experimental management techniques for maximizing the productive sharing of resources over large distances.

Capitalists

The Capitalist Party defines the far-right of political thought. They advocate for the concentration of decision-making power among small groups and the social Darwinism of the previous century. Most people across the political spectrum consider their overall worldview to be a form of dangerous revisionism of the past, but after a few beers many Neoliberalists may admit to finding some of their individual policy proposals fascinating.

Activist Movements

Many activist movements exist, and can be used as allies, antagonists, window dressing, and misdirects by players and GM's alike.

Neoprimitivists (or **Pastoralists** in Canada and east of the Rockies) live in communes outside of urban settings, where they seek fulfillment through reliance on hyperlocal, minimally consumptive practices. Ideologically, neoprimitivists are extremely diverse. Some live in rural homesteads. Others live in camps in the wildlands. They may be sedentary or nomadic, and live in prairies or forests. Many rely on survivalist modifications. Some readily use any technology, so long as they feel it aligns with their values. Others believe in the value of biological modification, but avoid modern electronics. Some readily welcome short-term guests, while others are more selective in who they welcome to stay among them. It is an umbrella movement that includes a panoply of people who wish to eschew many comforts of modernity for many different reasons.

Sovereigns are a subgroup within neoprimitivists who are more ideologically defined. They typically hold some level of mistrust of the wider world, and seek to demonstrate resilience and independence. Many believe that the present day civilization is fragile, and due for eventual collapse. Most are not assumed to be dangerous, but as with many intensely passionate ideologies, there are well-known cautionary tales in cases where a group of sovereigns went too far.

The Fae Folk are pagan neoprimitivists that embrace a mix of primalism, animism, and literary influence. They too carry mixed reputations. Some consider them a delightful source of whimsy that liven a forest. Others consider them to be dangerous pranksters or survivalists, and tell tales of the curses they inflict upon those who raise their ire.

The Hominid League for Just Uplift (HLJU) is one of the oldest parahuman-led parahuman rights organizations. They provide education, legal services, lobbying organization, and fellowships to develop a vision of a more equitable multi-species civilization. They are widely respected, but sometimes criticized by more radical activists for their moderate, incrementalist approach.

Enhanced Alliance is a civil rights organization which was founded just after the turn of the twenty-second century in the shadow of the machine uprising. Enhanced Alliance pursues many of the same goals as the HLJU, but is a younger organization (in both its founding and constituency) and pursues a more assertive posture in their demands for rights for enhanced parahumans. Enhanced Alliance is also much more actively involved in struggles for expansion of machine rights.

Basic Informational Resources for Birds (BIRB) is a group of avian allies which provides political advocacy for birds. Sapient birds are entitled to political representation, but have very low participation rates, because they have limited interest in most governance. BIRB lobbies for bird interests, assists with voter registration drives, and when legislation of high interest to birds arises they perform awareness campaigns and organize demonstrations.

The System for the Advocacy of Machine Welfare (sometimes called SAMW or "The System") is a mainstream advocacy network that does exactly what its title suggests. It seeks to identify and channel the broadest consensus among machines, so it is definitionally moderate to the extreme.

Orgs4Synths is an ally group that represents humans and other organics who support machine rights. They are often associated with their efforts to destigmatize organic-synth relationships, although they strongly try to dispel the reputation that this is their defining issue.

The System for the Advocacy of Organic Welfare is an anti-machine hate group.

Terminators are machine supremacists. Like white nationalism, the term describes a belief system rather than a specific organization, and most adherents won't admit to their adherence publicly. Like any extremist movement, most of their activity is not acting on their violent beliefs, but trying to recruit and radicalize others to their cause and expand the boundaries of acceptable discourse toward greater normalization of their extremism. Like 21st century Islamic extremism, "Terminator Philosophy" (as it's called in the press) is highly unpopular among the group which it claims to favor, as most consider it a fringe group that gets far more attention than it deserves and does terrible reputational damage to an already marginalized group.

Preservationists are a radical school of dogmatic conservationists who seek to protect – and ideally restore and extend – what they consider to be "undisturbed" nature to their view of its "original" state. The most extreme members have been caught trying to burn down or sterilize adapted ecosystems, and have been known to use mine-laying or boobytrapping to protect lands from any human presence.

The Water Cult holds that the hydrological cycle is part of a sacred circle, and will act without compromise in the service of maintaining what they consider the divine arrangement of that circle. Three years ago, two radical members bombed a desalination plant.

The Naked Pirates campaign for the 'right to replicate', seeking to completely remove data protections from everything. They are currently locked in a long running cyber-skirmish with **My Private Parts,** an affinity group dedicated to protection of medical records and blood-artists literally putting themselves into their work.

TyreKickers are a radical consumer rights organization that likes to stress test equipment and systems to ensure they are good enough when faced by a 'real' crisis. In the name of authenticity, they rarely warn places and disavow blame for very real damage. A related spin-off group, **CrabKickers**, like to do the same to ecologies and parklands, ensuring they would be resilient in the face of uncertain crises.

NostroCramo is a conspiracy death cult that believes that the world is a simulation or some other form of illusion. Many adherents suffer from severe cases of Faithless Reality Syndrome, and the group actively recruits among people struggling with the condition or who stray too deeply into any of the dark conspiratorial corners of cyberspace. They have been known to commit acts of violent extremism intended to break some perceived component of the artificial world or "liberate" people from the simulation. Their symbol is the metronome, and members sometimes adorn themselves with a piece of metronome jewelry or in other ways intended to identify themselves to one another while maintaining deniability.

CobraSoapXChallenge is an underground fighting tournament. The underground is part of the appeal, and the tournament goes in cycles of increasing danger and violence and scandal until it burns out or is cracked down on. A copycat tends to emerge a few years later.

Yimby Martyrs is a critical label applied to groups and individuals widely believed to pursue quixotic and unpopular projects within their personal environment due to a desire to signal virtue in competition with one another. They are known for proposing discomforting and unpleasant projects for which the costs far outweigh benefits to themselves and their neighbors. This can

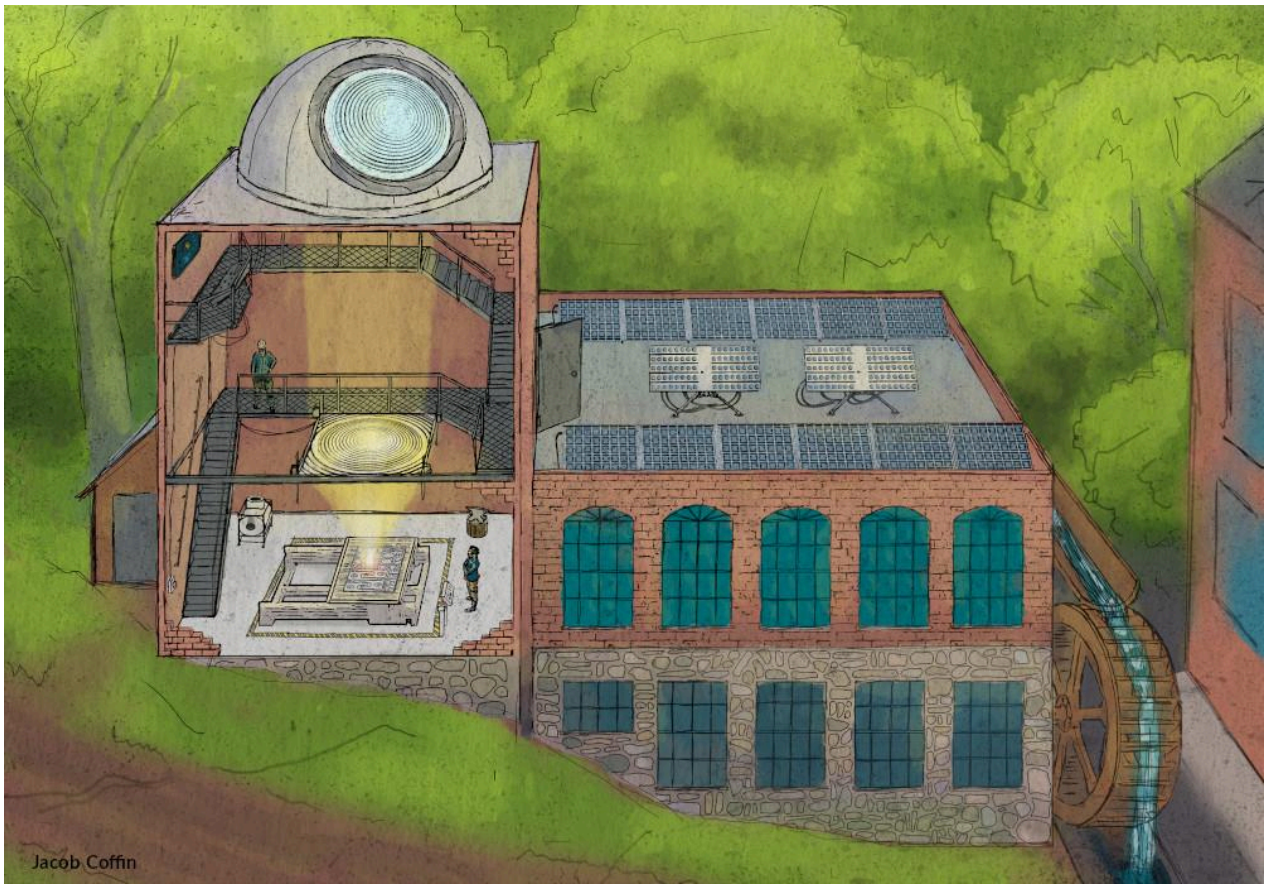
result in them encouraging unnecessarily costly approaches, riding roughshod over other stakeholders or undermining other members in the group due to egocentric impulses. The label is applied as a criticism of what may be viewed as reactionary extremists looking to find fault with any plan that is broadly popular.

Anti-expansionists are those who oppose human settlement off Earth. Their reasons include an insistence that resource use off earth is misdirected or that offworld development is morally injurious towards the exalted mother Earth. Some consider it a slippery slope to a far future in which Earth is abandoned, neglected, or otherwise taken for granted. Among anti-expansionists, attitudes towards Seekers range from hatred to pity.

Gaia's Womb is one of the most visible anti-expansionist organizations and operates primarily through public awareness campaigns and political organizing to obstruct the construction of space-related infrastructure.

Gaia's Spear is a militant offshoot of the already somewhat militant Gaia's womb. They pursue the same goals, but with a by-any-means-necessary dogma.

The Compton Cowboys are a collective of urban ranchers and local heroes based in Compton.



Facilitation and Auditing Agencies

Facilitation and Auditing agencies are investigative groups responsible for enforcing transparency agreements and other legal or regulatory obligations. Their cultures and purview vary widely. Some are highly professional and structured. Others are loose collections of freely acting agents. Their chapters operate in most cities, whether as small, local organizations, or large centrally managed ones. Some example groups are presented below.

Chyme Affinity Group

People are People is the official motto of this Agreement broker group. They offer training in cognitive empathy, diplomacy and connection building. Members are sometimes interested in a specific social struggle, or entered through the world of team performing arts. They tend to favor face-to-face meetings, and can generally keep even a large crowd in productive discussion.

Square Deal Agreements

One of the few agencies headed by a Synthetic Intelligence, and structured following numerical patterns that outsiders sometimes suspect is an elaborate joke. Square Deal are rigorous auditors, forecasters and supporters of interesting large ideas. They also carry out a lot of idiosyncratic work, or respond to Emergency Calls that you wouldn't expect. When asked, most members laugh and say "It's for the dataset!"

Wider Circle Aggregator

Everything we do impacts everything else. When assessing that impact, knowing where to draw the boundary line is art as well as science. WCA specialize in ecological impact assessment, and are generally agreed to be a good voice for the speechless stakeholders. Some members have been heavily tied into wild envoy programs, seeking and tweaking balances in new ecologies in arcologies, space stations, and outdoor terrestrial environments.

Understorey FAA

Even in 2100, Los Angeles is still riddled with antique concrete storm drains, forgotten pipes and overbuilt attempts to protect the city against occasional mega-rain events. Tracking and negotiating impact on flood risk, water rights, and filtration needs is specialist work, not least because it involves confined spaces, anaerobic bacteria colonies and earthquake shuffling of hollow areas.

RoadHog Auditors

Self declared knights of the road, members of this agency frequently draw on media ideas of noble questors, mounted ronin or biker-vikings. They specialize in historical understanding of laws and agreements, both where an old law is no longer compatible with modern society, or where an old tax has not been applied, and problems are beginning to escalate as a result. The 'problems' may not appreciate their intervention though, and that's the way they like it.

Faiths

Legacy Faiths

Most current religious movements persist, though possibly quite changed, and players are encouraged to make use of these. The following examples represent a far-from-exhaustive list:

- Judaism
- Islam
- Christianity
- Sikhism
- Buddhism
- Hinduism
- Zoroastrianism
- Baha'i

Seekerism

Seekerism is a movement founded on the search for meaning guided by our awareness of the existence of at least one advanced technological civilization which visited our star system millions of years ago. Some factions emphasize species-unity and local stewardship. Others emphasize growth and independence (see the discovery of the Eden Caves and Mars for more information). Seekerism means very different things to very different people. Many Seekers may practice seekerism alongside another set of traditions. Priests of the faith are known as Navigators. Below are the largest groupings and their distinctions.

Contemporary Seekerism

Contemporary Seekerism is a broad definition that encompasses ~45% of Seekers who view the lesson of the faith as to seek meaning and fulfillment through humility, self-examination, and a commitment to serve one's community. It shares many tenets with Humanist philosophy, often blended with traditional moral lessons and teachings of new animism. Some Contemporary Seekers are quite devotional, though many are casual in their practice. Numerous denominations exist within the umbrella of Contemporary Seekerism while employing distinct practices and ordaining their own Navigators.

Cosmic Seekerism

Though internally diverse as well, Cosmic Seekerism distinguishes itself from Contemporary Seekerism by a grandiose outward-facing vision. Cosmic Seekers believe that the search that defines the lives of all lightforms originating from Gaia are to find their brethren and join them among the stars. They are expansionist by definition, and take "the search" to be a literal one: find active extraterrestrial civilizations. Conquer death. Spread the human civilization over galactic scales.

Roughly 35% of Seekers identify as Cosmic Seekers. Most get along with other Seekers despite palpable friction in ideology.

Gnostic Seekerism

Gnostic Seekers – which comprise ~15% of the faith – share a belief that the truths are our civilization's providence and destiny extend beyond the information known and cataloged by science. Many integrate historical mythologies, such as the belief that Christ or other prophets were extraterrestrial visitors, or that the descendants of the ancient Martians or other extrasolar races watch our progress either from afar or concealed among us. Gnostic Seekers are typically welcome at nondenominational Seeker conferences and clubs, though it is not unusual for the interactions between Gnostic Seekers and the others of their movement to become acrimonious.

Paganism

Paganism is the broad umbrella term for faiths which predated and were often suppressed by the expansion of Christianity. Many were polytheistic and exalted elements of the natural world. During the early 21st century, practice of the historical Abrahmic faiths underwent a continuous decline as their themes were found insufficient by a growing number of people. As the challenges of the world become more present, the need for new answers inspired a reexamination of many ideas previously suppressed by the dominant monotheistic faiths that only accelerated once the Eden Caverns were discovered. Below are a collection of popular faiths and philosophies common within Fully Automated.

New Animism

Animism is the belief that a spiritual essence resides within everything. This concept arose independently across many belief systems, from those of the first peoples of the North American Continent to the Shinto faith of Japan. New Animism is a revival of this way of viewing the world that assumes that appreciation and reverence can imbue rocks, animals, plants, formations, landscapes, celestial objects, the memories of the deceased and anything else with an animating spirit. This may manifest in the form of worship of a primary focus such as Sol worship, Luna worship, or Gaia worship. It may take the form of generalized spiritual reverence for all things. It can be hard to classify the reach of New Animism, because although it is not the primary descriptor used by most people, the philosophies of New Animism have become ubiquitous throughout culture since its explosive resurgence during the 2160s.

Legacy Paganism

Some people like to keep it old-school. Wicca, Occultism, Mezoamerican, Egyptian, Norse, and Celtic pantheons all are appealing traditions to many people.

Pantheism & Panentheism

Pantheism is the belief that the divinity of what we call god is actually the underpinning of our reality, and that all is god. Panentheism is similar, but holds that although god is suffused through the universe, a deity exists that is unknowable but distinct. It defines a distinction between the creator and their creation, but embraces similar philosophical themes and moral attitudes.

Tribe of the Jengu

The Tribe of the Jengu is one of many historical pagan faiths to find new adherents. It is a loosely defined animist spiritual identity that worships the seas, oceans, their ecosystems, and water cycle. It is particularly popular among aguamodos, though by no means limited to them.

Social Media

The social media landscape offers ample fodder for interesting thematic and mechanistic elements. GMs have a lot of latitude for interpretation of how this space works. From a predictive standpoint, the authors of Fully Automated assume that the social media environment of 100 years in the future will be as alien to us as the culture and effects of modern social media would be to the people of the 1920s. With this in mind, we've approached this writing challenge by first assuming similarity to many modern conventions – message boards, group chats, viral content – and then viewing these elements through the structure of an immersive, high-bandwidth, decentralized, open-source web. Algorithms are transparent, platforms are open, and accounts are portable. The modern Fediverse architecture is a primary source of inspiration. Although it's understood that any architecture of the modern era is unlikely to remain a century from now, story modules reference the Fediverse anyway because it offers players a modern reference point to visualize what an open web looks like, and because we hope to endorse and popularize present-day movements to decomodify the internet.

Follower Counts

Each character's follower count is meant to represent the unique individuals that follow them across all platforms. For some characters, this may be personal friends and acquaintances, as well as friends-of-friends. For others, it includes people who share their hobbies and interests and have encountered them tangentially through posts and comments they've made. For characters with a high-profile public role, regular creative output, or recognition within a field such as competitive sports, this includes fans, journalists, and others in their industry.

Follower counts in game are appended with the suffix "Public", "Quasi-private" (or Quasi-Public), or "Restricted" to indicate a character's level of public accessibility. This is (as with most things in this manual) intended to represent a simplification of how things really work. Readers are encouraged to imagine that tools for understanding relationships are integrated directly into the social media navigation experience in a way that enables people in this era to maintain connections to a much broader network than is natural today. Visualizing network maps and quickly summarizing how people are related to one another and various groups is so natively integrated into the social media experience that if a player views the profile of anyone who commented on a post, they'd understand how they and this person are connected even if they aren't immediately familiar. In practice, this may feel similar to the way we might infer some knowledge of a stranger in a town market based on a recognizable family resemblance to others who are known to us.

In this way, even players with tens of thousands of connections will understand unfamiliar people as a distant neighbor or as the former romantic partner of an old schoolmate rather than as a mysterious stranger.

In addition to listing a character's number of followers, characters also classify how open their digital network is. These three general categories help distinguish people who are known broadly but shallowly from those known to fewer people but known well. This is particularly useful for clarifying whether a low follower count is an indication that someone is unremarkable or that they're just selective in who they want paying attention to them.

"Public" indicates that a character's content is widely available to anyone who wants to view it or connect with them. This is the case for most content creators, representatives, major public servants, cooperative leaders, etc.

"Quasi-private" indicates a character's network is widely accessible, but not freely accessible to all. They may apply conditions on who can follow them based on the number of shared contacts. They may or may not approve all their followers, but they probably can explain at a glance why anyone in their network is in it. That doesn't necessarily mean they've met, but they can see how this person would know them from a glance of a follower's profile summary.

A setting of **"Restricted"** indicates that a person exercises careful oversight of who can view content that they share. They likely know everyone they network with digitally on a personal basis. At very high follower counts, they may not be personally familiar with everyone, but they know exactly how they're connected, such as through a carefully organized collective. It should be assumed that anyone with a Restricted network would probably trust anyone in that network like family.

Ownership and Guardianship

Defining what kind of ownership exists and what forms they take is a natural point of curiosity and confusion. There is no simple answer. Ownership by virtue of financial claim is no longer typical. The term "owner" is still used to describe certain roles like a "restaurant owner" in the sense that a person may have primary authority over the operation of something due to their crucial role. Ownership is described or mentioned many times in this manual, but ownership with dominating power over people more directly involved (such as in the case of modern-day sports team ownership) is untenable. People forced to meet the whims of an individual operating in conflict with the preferences of a majority of partners would find their control quickly checked. As long as a leader of an operation is not operating in a way that is flagrantly unfair or depends entirely on inherited privilege, readers are encouraged not to worry too much about using the word "owner" when playing. If players or GMs need a better word than ownership, guardianship may often fill this role.

Playing Stealth Encounters

First, we have to acknowledge the elephant in the room: in the future, sneaking undetected through somewhere people don't want you to be is going to be very, very hard.

Cameras have become outlandishly cheap, and combined with machine learning that can recognize people and situations, it's going to be hard to creep around undetected. Additionally, we already have LIDAR which is increasingly common even in cell phones for visually rendering a 3D environment, and to top it all off, there already exists rudimentary radar systems that can identify human shapes within a 3D space through walls using Frequency-Modulated Continuous Wave radar (FMCW) and other forms of mm-wave scanning. It's quite cheap, and uses similar electronics to those found in a Wi-Fi router. Taken together, in the future it's not hard to have nearly flawless spatial observation of most places. So how could someone possibly sneak through anywhere?

The key is to recognize a universal truth: the greatest challenge of every security system is not figuring out how to keep people out, it's figuring out who to let in. Any environment can be kept secure if you deny access to everyone. But something that is completely inaccessible is unusable. The lesson from this is that stealth operations should largely eschew some of the common staples that we see in fiction such as person-sized ducts that allow characters to move through conveniently unmonitored areas and laser sensors that must be evaded with gymnastics. If you want to include either of these, you certainly can. But instead of relying on them, we suggest training players to find ways to exploit systems the way people do in real life: by figuring out how to trick the system into confusing them with an authorized user. This can include adopting disguises, entering a space piggybacking on the credentials of an authorized user, spoofing detection systems, and inventing reasons for a security system to expect an outsider, such as finding a way to create a maintenance request.

The most valuable technique we can advise to plan security intrusions in a world where surveillance is so ubiquitous – especially for people not confident in surveillance and security technologies – is to imagine that technological systems impose a similar challenge as a modestly attentive security guard in every monitored room or hallway. To bypass such systems, one should ask how they'd trick a guard into falsely reporting the absence of suspicious activity. Maybe it's by getting mistaken for an authorized entrant, or maybe its by getting such a guard to look away. But if players and GMs keep this level of oversight in mind, it not too hard to design a security system that feels consistent with the times.

See the stealth mechanics in the gameplay rules for details thereon.

Immersing Players

When planning and running campaigns, we advise readers to consider the lighting and weather conditions of the day; a day's place in the seasonal cycle; and the demands our bodies make of us over the course of a day.

In the present day, most of us frequently pay little mind to things like the phase of the moon, because it rarely enters into our life. In this world, a lot of small changes in behavior have made the natural world more present in people's lives, and as a result people generally hold a greater awareness of these things than we do. For instance, in the present many people have a natural awareness of the next major holiday coming up (especially if they determine when we next have a respite from work or study). We notice and anticipate the arrival of Halloween because preparations must be made. Parties are planned. And we also recognize the approach of the seasonal holiday periods with the awareness that work may pause for some and pick up for others.

In the world of Fully Automated, the day one might select for a date is less set by the number of days to the next weekend, because schedules are far less constructed around work. Instead, it's far more likely impacted by what night is going to have a great sky. Instead of looking forward to the fourth of July weekend, people may be looking forward to the early summer vegetable harvest. In the same way many of us check the traffic conditions as we get up, people in the 2120s check the surf report. And in most RPGs, the character is a hollow vessel that only feels damage taken and energy levels available for performing actions. We encourage people to imagine when they are most creative. When they need coffee, and the feeling of caffeine metabolizing. What time they eat, and whether it's a heavy meal or light one. When they need to use the bathroom, or if they're managing menstruation on a given day.

We advise GMs to get in the habit of describing the weather, and players to get in the habit of asking and describing how they clothe themselves for the moment.

Keep in mind that unlike the present day in which most of us spend most of our time within shelter, this is a world with far more outdoor and hybrid spaces, like covered patios and sunrooms. It's common to build large windows and operable skylights. Instead of heating and cooling every room to roughly 72 degrees everywhere all year round, it's common for indoor spaces to be warmer in the summer than in the winter, and people dress to be comfortable within this practice. By taking just a moment to picture environmental conditions and then using clothing as a way to relate to what it feels like to be a character in a body in that world, we hope readers will be able to better internalize these subtle culture changes quite naturally, and communicate this subtly foreign experience without a lot of additional effort. Much like choices in NPC background, the background presence of natural cycles is a big way in which GMs and players can communicate the uniquely solarpunk qualities of the world.

Transportation

Though transportation undergirds our entire world, it is often overlooked or skipped over in storytelling. But understanding how people get around their world is fundamental to understanding what the contours of their world are. Getting people to a location quickly or acquiring something that isn't on hand requires understanding where things are and how things move around. Most people don't have much awareness of how things move around in the *present* day, so here is a list of ways people and things get around.

Bikes and other micromobility devices

Bikes are the common means of traveling around a neighborhood or across a city. Most bikes are equipped with variable electronic assist, though many people may or may not use this much. In addition to the common two-wheeled upright bike, there is a panoply of small light vehicles. This includes familiar ones today such as skateboards, longboards, roller skates, rollerblades, recumbent bikes, tandem bikes, cargo bikes, rickshaws, onewheels, electric unicycles, and the occasional traditional unicycle. It also includes futuristic outgrowths of all of these, such as large monowheel motorbikes, freeline skates, jumping stilts, and kiteboards. There are already a LOT of ways that people can move quickly through the world, and many others from science fiction such as the magnapoon magnetic harpoon gun from Snow Crash; Falcon/Captain America's mechanical wings; grapnels; web shooters, and so on. Some of these might be more or less common, but if a player wants them and they don't break the logic of the world then it should be assumed that they exist.

Trains

Trains are the recommended way for characters to quickly relocate either across a city or around the world. In most cases, if players are heading uptown to investigate the last buyer of a missing antique electric cello then they'll head to a station and take a train.

Microbuses

Small vans will pick people up for free and shuttle them to and from stations. The players aren't likely to need this described to them most of the time, but if they needed to travel with someone with a mobility handicap or even someone simply in a state of exhaustion, you can describe them hailing an autonomous vehicle to take them directly up to a train's boarding platform.

Jitneys

From time-to-time, people may need to travel quickly to somewhere without a firm destination or follow a quick-moving street vehicle discreetly. A modern jitney is a form of lightweight taxi common in Asia (and for some reason San Diego!). In Fully Automated, they take many forms. They are small, light vehicles for zipping about town, and may or may not be driverless.

Cars

Cars still exist. This world exists long after car culture as a dominant mode of travel has passed, but they still find use for moving a group of people and cargo when the situation justifies it. Characters can easily have access to a car if they'd like. Typically, they'd likely have a vehicle in a shared building pool. Their car would likely be one kept in an apartment building garage that other members of the building or car share network can borrow when it's available. It's assumed that cars are electric or powered by hydrogen or some other advanced but theoretically realistic fuel source.

Trucks

Like cars, trucks still exist as a transport option for heavy deliveries. They may be used for moving material across undeveloped or rough terrain or for conveying things between a starting or ending location and another form of transportation such as a train, airship, etc.

Rotorcraft

Rotorcraft are flying, urban vehicles. They include flying cars, flying ambulances, and flying vans. They are used for moving equipment point-to-point around town, and between the roofs of tall buildings and the ground. Players may use rotorbikes as flying motorcycles, or use a variety of configurations for flying hoverboards, including in-line counter-rotating blades within a flying disk or saucer (as seen on the cover!).

These are fun vehicles, which are fast and can go many places. They can speed just above surface traffic or take to the skies in pursuit of someone in a flight-capable suit. If you think about modern consumer drones you get a sense for some of the form factors these might take, but feel free to use wings or rockets or kites or whatever makes sense to you. Throw in some dirigibles. Get wild.

Blimps and Lightweight Gliders

Blimps are a common form of aerial public transit similar to buses. They move on regular cyclical routes between designated stations. They are similar in travel time to buses. The same aerial stations used for boarding and disembarking blimps are also often used for launching personal lightweight gliders and other forms of flying transportation. These gliders require a launch assist, but once airborne can use small propellers to maintain or gain altitude to traverse great distances quickly. They can be landed on a strip or captured by a landing arm on sky stations where they are stored until a passenger is ready to relaunch them.

Planes, Rockets, and other aircraft

Because of their high energy demands, flight is less common as a means of high-speed long-distance travel than rail, but planes are still sometimes used for traveling very long distances very quickly, and spaceplanes and rockets are used for moving from the surface of a rocky object into orbit and beyond.

Ropeways

Often serving a similar role to trains, in that they provide a point-to-point public transit option using dedicated means, ropeways feature one or more cablecars suspended from one or more cables. Their actual configuration can include everything from simple chairlifts and monocable gondolas which dangle from a loop of moving cable elevated on tall poles, to aerial tramways where a large single car moves back and forth along one or more fixed cables. They are often used in mountainous areas where the design can overcome large differences in elevation, but they can also be useful in cities for crossing directly over buildings without impacting them, and in rural areas, as a cheaper alternative to trains with lower impact on rewilded habitats. Ropeways can be a dramatic set piece with great views, and they don't get stuck in traffic.

Watercraft

Ferry Boats are already a common transit element in many areas adjacent to a waterfront. Add to these jet skis, water scooters, sea scooters, electric surfboards, and other personal watercraft. The game assumes an expansion of cities into shallow tidal areas, and within this adoption of shallow water as part of the urban terrain, it should make sense that people travel across the water routinely using a variety of vessels.

Parahuman Transport

Horses, camels, llamas, and oxen are still possibilities for travel.

Law and Justice

It can be difficult to write a solarpunk version of legal justice in some ways, but surprisingly easy in others.

The difficult part:

The hard part arises from how ubiquitous and unquestioned our regressive form of policing is in our lives and media. We're so used to the terminology and iconography of patrol officers and prisons that it's hard to improvisationally roleplay alternatives to these things.

The easy parts:

- Many of us understand the myth of what policing is supposed to be. So start with that. Imagine officers who are highly self-disciplined and screened for good judgment and character.
- There are many present-day efforts to reform policing, so assume these were all implemented long ago. Cash bail doesn't exist. Pre-trial detention is strictly based on risk assessments. Officer records are publicly available. Mental health calls are handled by medical professionals and traffic enforcement by traffic professionals just as fires are handled by firefighters.

Further considerations:

When looking for more ideas, look to real-world demonstrations of more humane approaches, particularly in some Scandinavian countries. Examples of Scandinavian approaches include an embrace of harm reduction and a prioritization of rehabilitation over punishment.

There is also a freedom in exploring new and unusual ideas, such as relying on trained citizen crisis responders in place of professional keepers of the peace. If a violent robbery occurs, instead of alerting patrolmen who wander around all day, an alert goes out to dozens of regular citizens trained in deescalation and appropriate use-of-force tactics who happen to be living and working in the vicinity.

Imagining these things takes practice, but get's easier with time. When players encounter law enforcement, let it play out and then ask yourself afterwards if there was a better response that a society with abundant resources and sound priorities could've mustered.

Threatening Consequences: It's natural in an interrogation for characters to attempt to coerce a subject by encouraging them to envision the worst-case penalties that they may face for refusing to cooperate. Based on our experience in the present, many players and GMs may find it natural to say things like, *"They're going to lock you up and throw away the key!"* In order to avoid breaking the immersion of the world, share this section with them.

This impulse to loom consequences over someone is familiar, but things like long-term punitive action within a justice system predicated on rehabilitation and harm reduction is essentially equivalent to threatening torture. Instead, threaten things like life-long dishonor; loss of community or the respect of their loved ones; an arduous and unrelenting rehabilitative process; banishment from their home nation; or even exile to an ungoverned penal island or off-world. You can say things like,

“Do you really want to spend the rest of your life working to undo the harms you’ll be responsible for?”

“This is your last chance to choose a path of honor. After this your chance of being anything but a disgraceful embarrassment to those who know or raised you disappears.”

“Think about the people you’ll miss if you’re banished. What jurisdiction do you think you’ll be able to settle in? Do you think your neighbors will welcome you after what you’ve done? Do you think they’ll be the type of people you want to be welcomed by if they do?”

Detention Locations

Detention occurs when someone is found to present a serious risk to themselves or others unless prevented from moving freely. These are some examples of where a detained person may be held.

Two things that should be kept in mind are the following:

1. **Pretrial detention consists of a citizen’s arrest.** Because public safety functions are performed by volunteer citizens and not police authorized with special powers, anyone detained for a crime has the opportunity to challenge the justice of their detention, and anyone detaining a person must be prepared to defend that decision as the first step of an arraignment.
2. **Resources for an accused person are delivered swiftly.** If a player announces that they’ve detained a person in the midst of a violent act, that person will typically meet with a legal defender within thirty minutes and with a judge to be arraigned within 90 minutes.

Hotel rooms and private residences

If the goal of detention is to prevent a dangerous person from fleeing, they will often be relocated to the nearest comfortable place of their choosing until they’ve met with a judge to be formally charged. This means that instead of someone being driven in a squad car to a jail, they may find a quiet room near wherever they were restrained. If it’s nearby, they may be escorted back to their residence or that of a friend to wait comfortably for their representation to arrive. Most apartment buildings have guest suites available for visitors to the area, and a protector may look up the nearest one as a place to wait for arraignment. The choice of where to hold someone until they meet with a judge is up to whoever is detaining them, but that person must be prepared to defend the decision when the accused meets with a judge. Once charged, the accused will often be released to return home until their trial unless they are a genuine danger and/or flight risk.

Courthouse Detention Suites

If an individual is deemed too much of a risk to allow for release, they may be held in a suite at the courthouse.

Hospital Stabilization Wards

An individual in need of medical care or believed to be suffering from an acute mental health crisis may be confined to a hospital to receive treatment until ready to be released or relocated to a courthouse detention suite, if deemed necessary.

Long-term supervised living center

Any act of detention is meant to maximize dignity and demonstrate an environment of peace and cooperation that reflects the behaviors a detained person is meant to uphold in open society. Crucially, these spaces are not meant to exist as fiercely walled-off spaces from society. Those outside detainment are offered as much access and visibility into a detainment center as possible, and those inside them are offered as much ability to leave as possible. For this reason, a person undergoing a long-term rehabilitation program will typically live in a supervised care center where they're afforded the ability to come and go within the terms of their sentence or treatment plan. These places often serve a mixture of people under court-ordered supervision and people under voluntary supervision due to infirmity or other challenges that make living with assistance preferable. Many people who are sent to supervised living compulsorily will remain once given the freedom to leave. This is encouraged, as it reduces recidivism to allow previously incarcerated residents to retain their support network even after regaining full freedom By doing so, rehabilitated people contribute to the culture of these living centers by demonstrating successful completion of rehabilitation programs and reducing the sense of confinement or stigma associated with supervised living centers for new residents.

Social Classes

Though efforts to erase class were successful in eliminating a capital-owning class, Class as a concept remains, though much changed. In the twenty-second century, social class is largely defined by perceptions of individuals' roles in the production and consumption of goods and services. There is a high degree of class mobility, and the privileges and penalties afforded by class are far less severe. As in the present, one's class is purely subjective.

Why does classism still exist in Fully Automated?

It's reasonable to wonder why we would choose to envision the persistence of classism in an optimistic future. GMs can disregard this section, but we believe that assessing and ranking the social standing of members of a society is a tendency that runs deeper than capitalism.

Narratively, variability in social standing makes sense. A world in which people are not competing to accumulate wealth is not one in which people no longer compare their influence and reputation against their peers, but rather one in which these comparisons are far more subtle and nuanced. It makes sense as a driver of conflict that GMs should feel free to employ, especially as a way of examining how class shapes our society today.

Most importantly, we believe that a society that has no notion of class is far less likely to be genuinely classless than to have simply lost the sense of class consciousness that allows us to recognize and deal with class inequities.

The **consumer class** – sometimes called " 'sumers" – consists of people whose primary influence on the economy is consuming culture. They serve a vital role as an audience that reacts to and shapes what art and culture is produced. They hold a social status similar to that of the working class today in their lifestyles, and they make up about 75% of the population. Most members of society appreciate that society has advanced to a point in which a person's worth is not dependent on their productive output and recognize the dignity of a life of leisure. Still, there persists a minority who will always seek to find reasons to stigmatize and look down on others.

In addition to the consumer class is the **Creator** class and the **Executive** class.

The executive class consists of business leaders, resource managers, elected representatives, and anyone who oversees large operations.

- A typical executive might manage a farm where they supervise a staff of horticulturalists.
- They may be the principal of a school.
- They may operate a bar, night club, arcade, or escape room.
- They may administer a busy online forum.
- They may be a mayor of a small town or large city, or a member of their neighborhood council.

- Executives make up about 5% of the population.
- As in the present, serving in roles of leadership often bestows material benefits. Executives often earn comfortable luxury incomes, and those who manage very large institutions may live a lifestyle that we would recognize as rich.
- High earning executives receive their privileges in the form of direct benefits like specialty foods, travel opportunities, and premier housing choices. It is difficult for them to amass long-term stores of fungible wealth.
- Many are managers who make the equivalent of $100k in today's dollars: comfortable, but nothing like today's 1%. Executives are often the elected leaders of collectives or work groups in a larger institution in which they are both managers and also workers.
- Executives typically hold positions of power, but are accountable to people who are impacted by their actions. Most large businesses are owned by a mix of workers, clients, and the state. Sole proprietorship or investor ownership is rare.

The creator class make up the third class. They are equivalent to today's middle-class worker. This includes writers, researchers, actors, teachers, chefs, social media content creators, care workers, athletes, product designers, sex workers, repair technicians, service workers, etc.

- These are most of the people who work what we'd call a "job".
- These include service, custodial, and physical labor jobs. These jobs still exist, but they are fewer and aren't treated as menial. Many people prefer to have their food made and brought to them by a human instead of a machine, so jobs like server and retail worker still exist. And they exist without social stigma or drudgery, because no one does them out of desperation.

As in the present, the boundaries between these classes are highly subjective. Most elected leaders would be widely considered to be of the executive class, although many would consider their family life, artistic life, or other creative work to be their primary identity. Most creative workers will vary their productivity in alternating waves of rest and motivation. At a glance, there's no real marker to distinguish a member of the consumer class from a creator or executive who eschews attention. Overall, these classes serve as a somewhat silly reminder of the stubbornness of the human tendency to compete amongst ourselves for prestige.

Glossary

Embodied Synth - A synthetic intelligence running locally on mobile hardware that the synth controls. This may be bipedal, quadrupedal, wheeled, aquatic, winged, or any other means of locomotion.

Android - An embodied synth in a humanoid form.

Avatar - A humanoid machine operated by a user remotely.

Instance - An active individual consciousness of a synthetic intelligence. Instances (as the name suggests) differentiate a synthetic intelligence program (which can be executed as an unlimited number of instances) from all the separate, unique executions of that program that each identify as a unique conscious individual.

Parahumans, Parahuman animals - Non-human animals. Can be used to describe any non-human animals, but typically refers to enhanced non-human animals.

Sentient - Aware of one's surroundings and able to respond intelligently to circumstances based on a mental model suitable for predicting effects and solving problems.

Sapient - Possessing self-awareness, including an ability to self-examine and deliberately change ways of thinking. Possessing a persistent understanding of the past, present, and future.

Sapients - Creatures which are sapient.

Presentist - Possessing sentience, but lacking the long-term narrative memory that is a key hallmark of sapiance.

Presentists - Creatures which exhibit presentism: Non-sapient sentient creatures like dogs, cats, horses, cows, pigs, etc.

Progressive Compositional Cascade Syndrome (PCCS) - PCCS is a machine dysfunction which can grow slowly and without a synth's awareness until such a time that it has become too pervasive across their positronic brain that any backup without the contamination is too far back in time to be sufficiently congruent with the synth's present experience to resume function.

Protosapient - Protosapient is an older term which describes creatures which are sentient but lack the qualities of sapience. It's functionally similar to 'presentist'.

Ultrasapient - Possessing super-human intelligence, with the ability to understand the world at a scale and complexity which exceeds the capacity for an average human to conceptualize.

Goddard-Lei principle - The principle that the functions of higher-thinking responsible for sapience are intrinsically linked to debilitating psychological effects which limit the ability of

an organic mind to possess ultrasapience without experiencing psychological distress and antisocial effects in proportion to their elevated cognitive abilities.

Faithless Reality Syndrome (FRS) - A loss of ability to accurately distinguish real life from simulation, hallucination, or dreamstate. Mild, short-term FRS is common after experiencing VR/XR experiences. Severe, persistent FRS can be a debilitating and potentially light-threatening condition caused by severe trauma within a VR/XR experience.

Bavishi-Singh Exercises - A set of exercises used to mitigate Faithless Reality Syndrome by demonstrating that a calculator is being used to correctly solve mathematics problems, and thus prove that the calculator cannot be part of a hallucination or dream state.

Spomitapi - The demonym for people who live in orbital habitats.

Total Incongruity-based Backup Failure (TIBF) - A condition in which a synth backup encounters features of the world that are too dissimilar to those of when the backup was made and suffers a catastrophic crash.

Incongruity-based Backup Reselfconceptualization (IBR) - Similar to TIBF, IBR occurs when a synth backup finds the world unlike the world of when the backup was made, but instead of crashing, the synthetic intelligence persists by recognizing itself as a distinct personality from the instance which created the backup. It may consider itself a sibling or the offspring of the original instance. It may mourn the original instance, or even experience hostility towards it.

Mind diving - The practice of exploring an immersive virtual interpretative construction of a subject's mental state.

Skidoo - The common term for a mind dive.

Neurospace - The realm in which a mind dive/skidoo takes place.

Mindscape - The simulated physical environmental surroundings psychonauts experience within a skidoo.

Accursioning - Mind diving performed on a willing subject for investigative purposes.

Incursioning - Mind diving performed to probe the mind of an unwilling and/or unaware subject.

Obliviation - Mind diving with the subject of the dive present to assist them in addressing neuroses through confrontation.

Taming - Mind diving with the subject of the dive present to assist them in addressing neuroses through nurturing acceptance.

Media Recommendations

Because this game takes place in a world that is not yet a fixture of mainstream fiction, we share the following diverse media recommendations because we think they may provide interested readers with inspiration of one kind or another. Not all are solarpunk, and they range greatly in tone. What they have in common is that we think readers may find them interesting and/or useful.

Other RPGs

Solarpunk 2050 by Thorsten Sick

2023 - http://solarpunk2050.de/

Solarpunk 2050 is a solarpunk RPG built on the FATE system. It takes place in a world shaken by climate catastrophe and walking a long road of recovery. It's got a robust set of resources framed around three playable factions: Pioneers, Norms, and Lost.

Pioneers are forward-thinking futurists who embrace novel technologies and ideas. Their cities and neighborhoods reflect this ethos, and pioneer players get skills in prototyping.

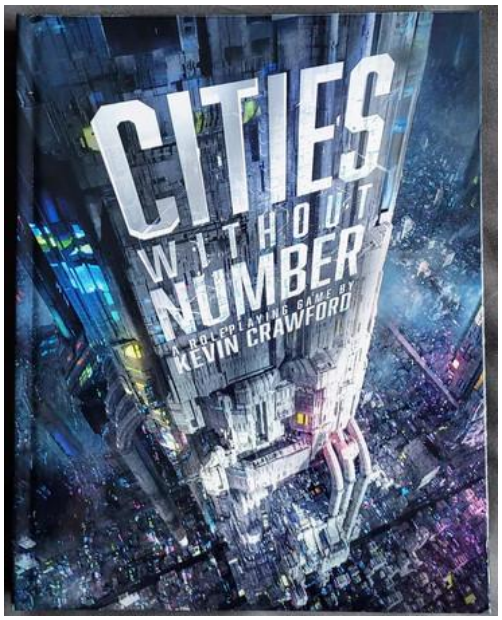
Norms are more conventional and cautious. They use cooperation and AI assistance to run cities and neighborhoods that are stable and thrive. Their skills are in controlling software and acting cooperatively.

Lost live a rugged life on the ruins of collapsed infrastructure. Some maintain an affection for the failed society of the past, and others simply learned an understandable fear of new technology. Either way, they specialize in bushcraft, and rely on simple, timeless tools and techniques of survival.

If you're looking for a FATE system in particular or an approachable, faction-based setting with a diverse mix of modern futurism, experimental solarpunk living, and classic post-apocalyptic wastelands, it's worth a read.

Cities Without Number by Kevin Crowford & Sine Nomine Publishing

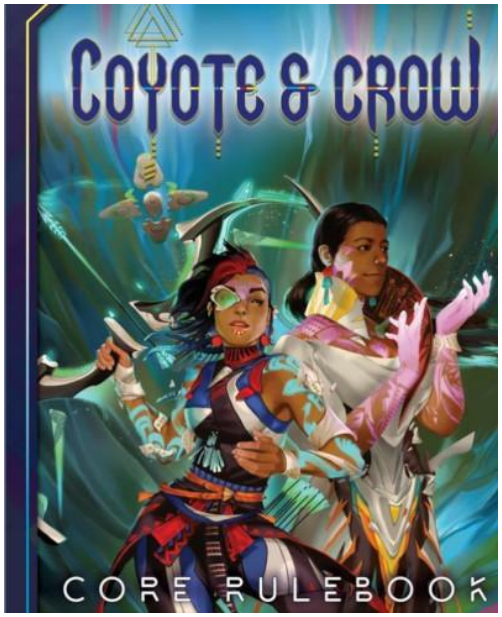
2020 - https://sine-nomine-publishing.myshopify.com/



Cities Without Number is an Old-School Revival style sandbox cyberpunk game. It's light on rules and heavy on resources. It eschews lots of in-world stories and lore in favor of providing tables and advice for procedurally generating a cyberpunk world. While it's explicitly cyberpunk, author Kevin Crawford has done such a good job deconstructing the beats of a story and the component elements of cyberpunk that it could provide many GMs with helpful inspiration. Some of the content can fit into solarpunk, and what can't makes excellent fodder for subverting tropes. Also, the core rule book is free!

Coyote & Crow by Coyote & Crow LLC

2020 - https://coyoteandcrow.net/



Coyote & Crow is an alternate-history tabletop game in which a meteor strike prevented Europeans from colonizing the Americas, while also introducing new mystical elements into the world. It takes place in a high tech future populated by the original peoples of the Americas. Coyote & Crow lovingly invites players to imagine a society shaped by the culture and values that were supplanted during the land theft, subjugation, and genocide that took place during the conquest of Turtle Island. While it's a very different game by virtue of the fact that it diverges from our history hundreds and hundreds of years ago, it's an engrossing entry in the canon of near-future high tech RPGs that reject the fundamental philosophical themes of traditional cyberpunk. Also, as a product of dozens of indigenous writers, it provides an outstanding set of tools for GMs looking to find ways to respectfully include indigenous influences in their tabletop adventures.

Blue Planet by Jeff Barber, Biohazard Games, & Gallant Knight Games

2020 - https://www.biohazardgamespublishing.com/blueplanet

Blue Planet: Recontact is an update to an acclaimed 1997 hard sci-fi game set on the aquatic planet Poseidon. In Blue Planet, players can play as modified humans going on adventures with whales and dolphins against the backdrop of Earth's messy, complicated first attempt at colonizing a second planet. Like Coyote & Crow, it's a very different concept to Fully Automated, but a wonderfully realized vision that will likely have obvious appeals to many of the same players.

Lunar Echos by David Blandy, Sydney Bollinger, Jay Dragon, Becky Chambers

2023 - https://affinity-games.itch.io/

Lunar Echos is a hack of Wanderhome, a popular RPG for telling serene stories about meditative journeys through pastoral settings. Lunar Echos reskins Wanderhome based on Panga, the setting of Becky Chambers' Monk and Robot book series.

Neon Black by Michael Elliot & Sam Dunnewold

2020 - https://notwriting.itch.io/

Neon Black is a cyberpunk game that uses the Forged in the Dark system. The system uses broad, highly interpretable skills to establish checks using d6 dice pools. The primary story types are heists and operations where players plan a job, then execute it. In addition to trying to complete their work in the present, players can invoke flashbacks when encountering problems to explain how they neutralized it in advance. Neon Black uses this mechanic to tell stories in which players take bold action to challenge the power structures of their hyper-capitalist hellscape. Players fight to challenge the rich and greedy while building resilient communities to take the world in a better direction.

Legacy: Life Among the Ruins by Minerva McJanda, Douglas Santana Mota, Jason D'Angelo, Rebecca Curran

2018 - https://ufopress.co.uk/legacy-life-among-the-ruins/

Legacy is a big-picture RPG where players control entire families and communities as they tell the sweeping historical arc of a world recovering after cataclysm. While it begins in the post-apocalypse, where it goes depends on the players.

Ecopunk 2044 by Dice Kapital

2022 - https://dicekapital.itch.io/ecopunk2044free

ECOPUNK: 2044 is an environmentalist cybernoir tabletop RPG, set in a future of advancing environmental collapse known as the Death Spiral. Players will take on the role of 'Punks' - outsiders, activists and rogues - who fight to protect humanity's survival. It's an angry game with a bleak vision that brings cyberpunk back up to date. It uses a neat dicepool system with extensive hacking support.

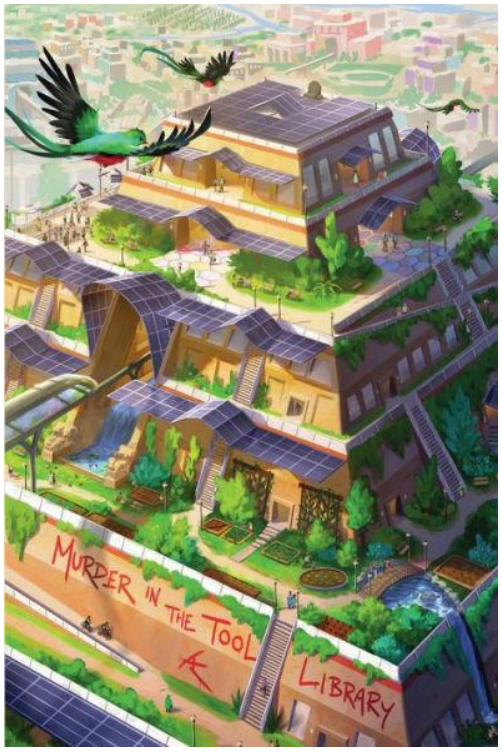
Books, fiction

Murder in the Tool Library by AE Marling

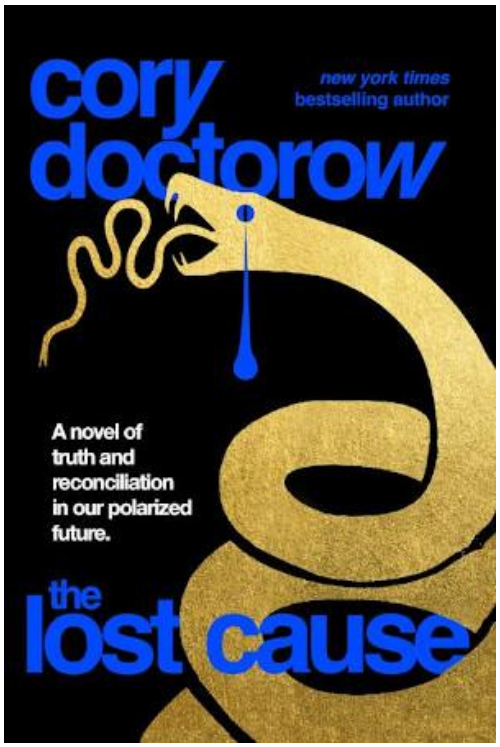
2023 - Barnes & Noble Press

The shocking murder of a painter in the city's central library of things sets off a frantic investigation as New Tollan's citizen detectives seek to find the killer and hold them accountable.

Murder in the Tool Library provides a masterful demonstration of what it looks like for a cast of diverse characters to embark on thrilling adventures across an ecosocialist city of tomorrow.



The Lost Cause by Cory Doctorow
2023 - Tor Books



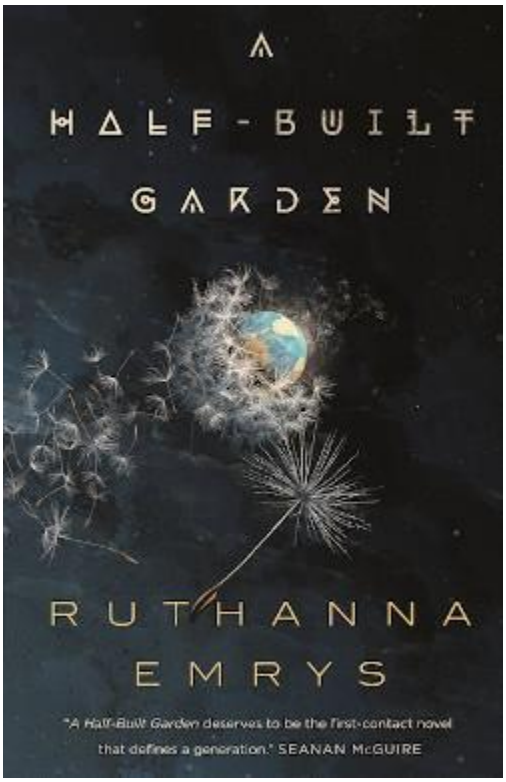
"It's thirty years from now. We're making progress, mitigating climate change, slowly but surely. But what about all the angry old people who can't let go?"

Cory Doctorow tells a thrilling story of polarization and violent clashes over infrastructure. The story is set in the Burbank suburb of Los Angeles one generation removed from now, and describes events that could easily be assumed to have occurred in Fully Automated one or two generations earlier than when the game is set.

Walkaway by Cory Doctorow
2018 - Tor Books

Walkaway adds to Doctorow's extensive bibliography of thought on how we break out of our capitalist moment with a novel in which anarchists revolt from society by leaving it behind for the hinterlands of abandoned places. While very distinct from the setting of Fully Automated, the vision of what high-tech mutual aid looks like and the presentation of technologies used to realize it still provides ample inspiration.

A Half Built Garden by Ruthanna Emrys
2022 - Tor Books



An alien arrival in a time of recovery throws the future into uncertainty.

Gamechanger by L. X. Beckett
2019 - Tor Books

A social worker and gamer attempts to understand an antisocial pariah in a world that is solarpunk but distinctly non-utopian.

Red Mars, ***Green Mars***, and ***Blue Mars*** (The Mars Trilogy) by Kim Stanley Robinson
1992, ’93, and ‘96 - Bantam Books

Settlers on Mars chart a course of scientific and political revolution.

New York, 2140 by Kim Stanley Robinson
Orbit Books, 2017

Kim Stanley Robinson adds a flooded New York to his extensive catalog of scientifically informed futuristic cli-fi.

A Psalm for the Wild Built by Becky Chambers
2021 - Tor Books

A monk on a peaceful post-industrial moon goes on a journey of self-discovery that brings them into collaboration with one of the famed machines that had peacefully departed human civilization to live lightly (and curiously) within the wilderness.

The Terraformers by Annalee Newitz
2023 - Tor Books

An Environmental Rescue Team cares for the planet and its burgeoning eco-systems as their parents and their parents did before them. But the bright, clean future they’re building comes under threat when a member discovers a city full of people that shouldn’t exist, and they begin to question the mission.

Ecotopia by Ernest Callenbach
Bantem Books, 1990

A famous early work of solarpunk utopianism.

Books, nonfiction

Fully Automated Luxury Communism: A Manifesto by Aaron Bastini

2018 - Verso Books

In Fully Automated Luxury Communism, the writer who coined the term that inspired the title of this game explains in accessible language why we must leave capitalism behind, and how he proposes we get started. It's a clear-eyed vision that provides a great starting point for those seeking a rigorous, thoughtful presentation of how the world in FA! is not only possible but necessary.

Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge and the Teachings of Plants by Robin Wall Kimmerer

2015 - Milkweed Books

"Drawing on her life as an indigenous scientist, a mother, and a woman, Kimmerer shows how other living beings—asters and goldenrod, strawberries and squash, salamanders, algae, and sweetgrass—offer us gifts and lessons, even if we've forgotten how to hear their voices."

Braiding Sweetgrass is part memoir, part treatise. It's an illuminating work of deprogramming that introduces readers to schools of philosophical thinking that have been buried in an attempt to exterminate other people and their ideas. Kimmerer patiently shares pieces of this wisdom that are making a resurgence in a time when the shortcomings of our current ways of thinking have become deafening. The relationship with the world around us that Kimmerer describes might be essential reading for anyone looking to truly reimagine the world as it can be.

YouTube Channels & Podcasts

Andrewism

Not Just Bikes

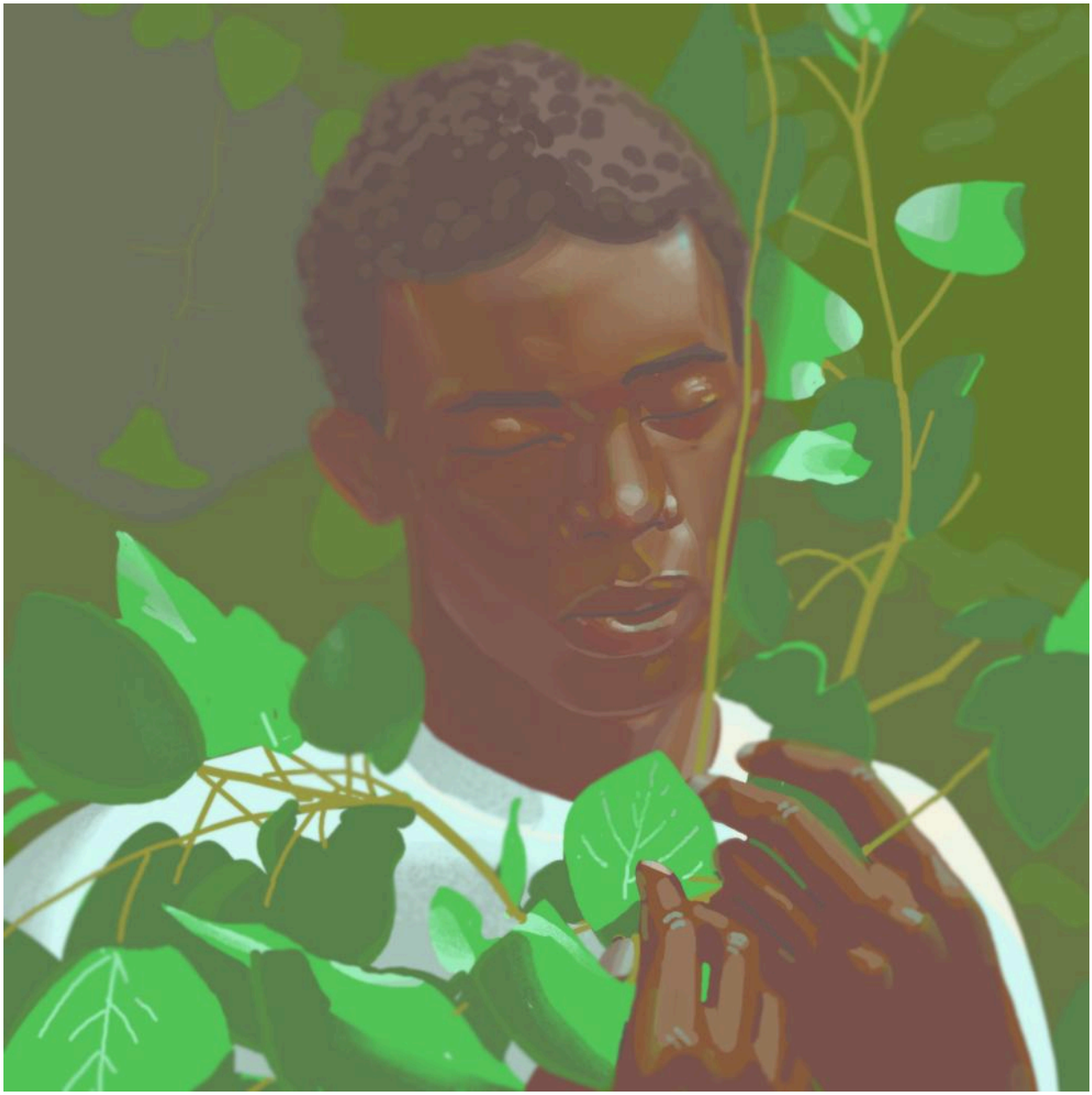
Solarpunk Presents Podcast

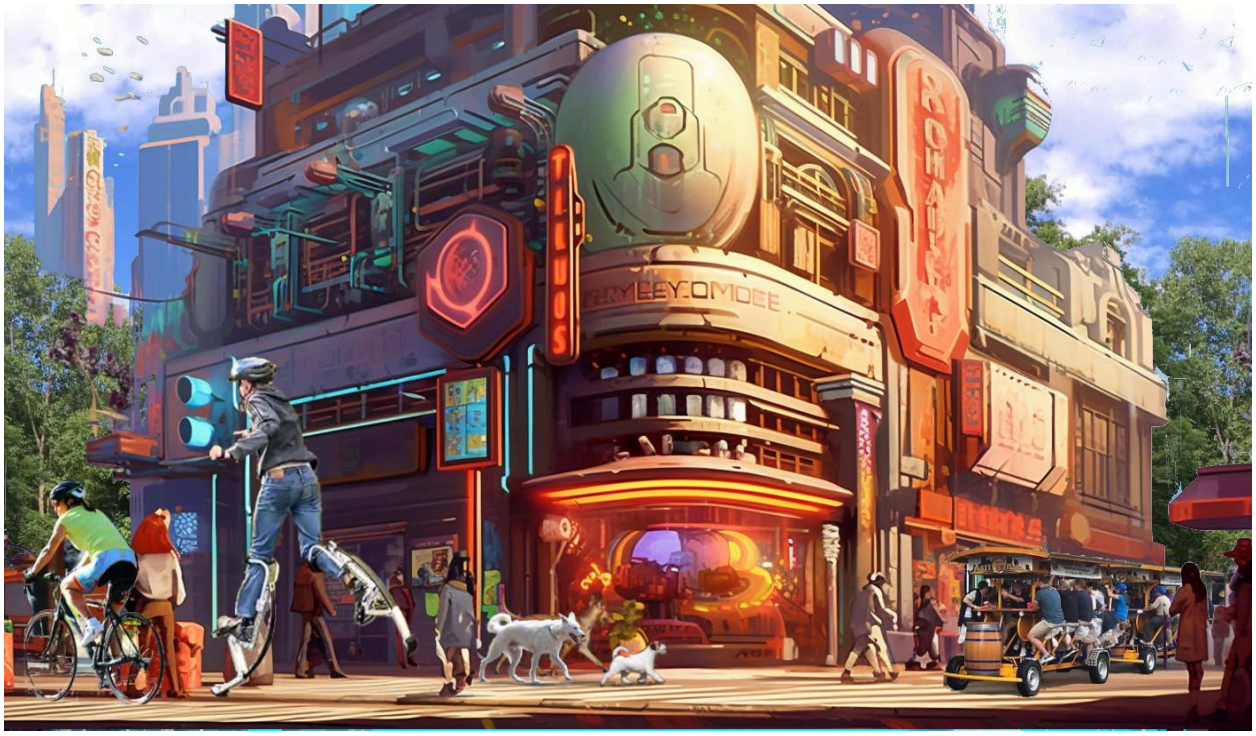
Damilee

Solarpunk Prompts Podcast

Miscellaneous

Low-Tech Magazine





Resources for GMs

This section includes practical information and references to other tools for GMs looking to run games and make custom content.

Setup Checklist for GMs

Here is a checklist of things you may need to run a game:

☐ **Character Sheets**

Character sheets may be filled out in advance or during session 0. Just make sure when starting that players know their stats, skills, abilities, combat actions, etc.

☐ **10-sided Dice**

These dice can be purchased at a game shop or 3D printed (we've tried! It works!). Or you can just use virtual dice built into a virtual tabletop, or Discord, or on a mobile app, or a dice roller website.

☐ **Adventure Module**

Have your notes and/or adventure book on hand. The starting adventure stories are contained in "Campaign 1: Regulation".

☐ **Combat maps**

If you're playing on a virtual tabletop like Roll20, create a map with a hex grid of the correct dimensions for the map. If you're playing in biospace, print out the map and tape it together. Maps are composed in multiples of a typical piece of 8 ½ x 11" paper.

☐ **Fudge Dice**

Fudge dice are six-sided dice with a ⅓rd chance of rolling a minus, plus, or neutral. Each player will typically need two for most combat attacks and defenses. Like the d10s, you can buy these at a store, 3D print them, or use an app of some kind. You can also use two regular six-sided dice, reading the sides (1-6) as -, -, 0, 0, +, +.

☐ **Actions & Items Sheets, action cards, and item cards.**

The Actions & Items sheets and cards are certainly optional, but are recommended as a way to make combat and tool use much more fun and easy. Whether playing IRL or on a virtual tabletop, these can be in a presentation program like LibreOffice Impress, Google Present, Microsoft PowerPoint, or they can be printed out. Item cards can be written on cut-up note cards or cut up printer paper or Post-it notes. These are not meant to create a burden, for GM's or players. By simply providing players with any quick visual reference of what actions they have available and what items they're carrying with them, it allows them to make better use of tools and better decisions during play.

Story Hooks

“What kind of adventures do players go on?”

This is the most common question newcomers ask about the game. Rules and world guides are great, but most players come for a story. In addition to providing fully playable adventures, we’d like to share a sample of basic premises. The main purpose here is to answer that fundamental question directly with examples.

Campaign 1: Regulation

These are summaries of developed stories contained in the first published collection of adventures.

Part 1*:* A Demonstration of Power - In this quick demo mission players negotiate and then fight for a data backup that could expose corruption among the Pacifica Grid Operators Consortium.

Part 2: Psychonautica - A psychonaut’s animal companion calls for help when her human friend falls into a catatonic state after trying an experimental psychedelic. Players must assist her doctor in finding an antidote in order to safely revive her… before it's too late. To do so, they’ll need to go on an adventure that takes them across the city and inside the patients’ mind.

Part 3: Piece of Mind - A collective of whitehat biohackers needs help. A dangerous chemical reagent has been stolen, and they suspect their blackhat rivals are planning an insidious scheme. Players have 36 hours to figure out who stole the reagent and what they intend to do with it so that they can stop a dangerous plot with enormous consequences.

Campaign 2: Monkey Business

These are stories that have been played among friends, but haven’t (at the time this is being written) been composed into published adventures. If this game is well received, these are likely to be the basis of the next collection of playable adventures.

The AKC Job - An investigator was targeted for assassination while investigating the finances of the American Kennel Club. Their partner wants answers they can only get from a data heist.

The Most Dangerous Hunger Games of Dr. Moreau - A powerful business leader is abducting enhanced chimps to a remote island, and two more just went missing.

Hunting the Hunters - On a remote island, a team of crisis responders have just rescued a group of hostages. Now begins a game of cat and mouse to find the hostage takers before they disappear.

Trouble in Paradise - Someone made off with a cash box at the Paradise Forest gentleman’s club. The manager wants it found before a meeting with the “vampire” prince of Los Angeles.

Campaign 3: Untitled Future Stories

These are ideas that haven't been played yet (with the exception of "The Missing Element". That one has been played, and was a blast). They offer more basic ideas of the kind of conflicts, investigations, and challenges players can experience.

Town and Country - A dispute is escalating between a community of shepherds and a locomodo who has been preying upon their flock of sheep.

The Missing Element - A baseball-sized specimen of the world's heaviest element disappears at a physics conference. Who could've stolen the impractically heavy ball? Why? And *how?* Players interview a cavalcade of eccentric physicists on a remote island research center. Could the research center's stable miniature blackhole be involved? Probably not.

Where's Jeff? - A competitive hiker goes missing days before a major competition. The result is an unusual missing persons case. Not all who wander are lost. Is Jeff?

El Mula de Datos - An unsuspecting person is the target of an aged CIA spook desperate for a long forgotten data trove that was hidden in a young child's cells back in the bad old days. Now, a race is on to protect the target and keep the data out of the hands of their pursuer.

Funny Business - Rising comedian Santos Ray is set to take the biggest stage of their career in three hours. Where are they? It'll take a Citizen Kane-inspired journey through their past to find them and get them to the show on time before they miss out on the chance of a lifetime.

Campaign 4: Seas and Skies

These are more unplayed story ideas (except for "Last Stop till Atlantica", which was also a big hit among friends). They're meant to expand adventures from familiar settings into the frontier lands of space, the oceans, and other extreme environments.

Last Stop 'till Atlantica - A controversial deposit is being made to the Atlantica seedbank. The depositors insist that they just want to fulfill their contract, but critics contend that in their haste to complete obligations imposed after a blight they're risking contaminating the bank with the fungus that necessitated their withdrawal. What follows is a high stakes escort mission as an undersea train faces unexpected threats.

Truffle Scuffle - An orbital research station suffered an attack after it made a breakthrough in fungal cultivation. To come to the aid of the head of the collective that was targeted, players must infiltrate the French cavern lair of a powerful mycomancer to find evidence before a great discovery is lost.

Computer Bug - An organic supercomputer in an underwater settlement is endangered by a bacterial infection. Players must venture into the deep for a cure.

Pod Guard - A famous pod of whales is making its annual migration through LA's waters, where the matriarch is set to perform a highly anticipated whalesong concert. But the world-famous Cetacean singer has an obsessed stalker fan.

Common Shops and Public Places

Below is a non-exhaustive list of enterprises that one might come across to be used to describe the environment. They're contained in numbered tables to allow GMs to randomly populate a scene with dice rolls if desired.

Social services & Community Centers

	1	2
1	Gov. constituent services offices	City or county administration office
2	Political action group campaign offices	City or neighborhood hall
3	Mediation & legal services	Public works office
4	Advocate's office	Playground
5	Courthouse	Preschool / Primary School
6	Public House	Secondary School
7	Stables	University
8	Newsrooms & nonfiction media production	Stadium
9	Animal adoption center	Fire Station
10	Public Health Office	Metro hub

	3	4
1	Christian church	New arrival welcome center
2	Catholic cathedral	Materials Safety Office
3	Mosque	Cemetery Forest
4	Hindu temple	Mortuary
5	Synagogue	Production artists & designers
6	Pagan temple	Travel agency
7	Shinto shrine	Interior designers & decorators
8	Botanical Garden	Entertainment media production
9	Youth rec center	Coding and software auditors office
10	Elder rec center	General recreation center

Service businesses

	1	2
1	Coffee Shop / Deli / Bodega	Urgent care clinic
2	Spa / Massage Parlor	Wellness clinic
3	Hookah lounge	Veterinary clinic
4	Barber shop	Dentist
5	Tattoo parlor	Post office
6	Body mod parlor	Shipping center
7	Bakery	Credit union
8	Printshop	Notary
9	Haberdasher	Herbalist / Apothecary
10	Pizzeria	Sandwich / Taco / Shawarma shop

	3	4
1	Gym, general	Woodshop
2	Climbing & parkour gym	Fablab
3	Boxing & wrestling gym	Metalshop
4	Spa	Glassworks studio
5	Bike kitchen (bike repair co-op)	Ceramics studio
6	Wingsuit kitchen (wingsuit repair co-op)	Dance studio
7	Hackerspace	Recording studio
8	Community kitchen (food this time)	Filming studio / lot
9	Community garden	Community bio lab
10	Community greenhouse	Empty flexible space

Activity & Performance

	1	2	3	4
1	Sound stage	Ecological centers	Art gallery	Aquarium
2	Theaters, live	Zoos	Clothes reinvented	Aviary
3	Acting & comedy school	Botanical gardens	Sculpture garden	Research lab
4	Arcades	Water park	Abseil Graffiti wall	Littletown
5	Live music bar	Skate parks	Haberdashery	Sports bar
6	Kite dance park	Swimming lake	Bath house	Dojo/ring
7	Acrobatics park	Sports courts	Sex club	Pitch changing rooms
8	Sets and costumes shop	Park space	Night club	Forest school
9	Vivarium	Poet's corner	Hedon drug space	Performance kitchen
10	Acoustic practice rooms	Granary and mill	Insomnia cafe	Growers forum

Retail

Note: many of these can be interchangeably known as a shop or library

	1	2	3
1	Corner grocers	Sports supply	Repair, electronics
2	Big grocery stores	Art supply	Repair, shoes
3	Grainery	Tech supply, components	Repair, furniture
4	Pharmacy / Chemist	Tech supply, end products	Repair, Clothes
5	Plant Nursery	Construction supply, plumbing	Repair, metalware
6	Bookstore	Construction supply, structure	Haircuts and styling
7	Gamestore	Wingsuit & airboard shop	Co-working space
8	Food Truck	Wine, cheese, and fine sundries	Seed trade hub
9	Pharmacy	International foods market	Junk shop
10	Garden supply	Seasonal / holiday shop	Funeral directors

Production

	1	2	3
1	Food, simple	Power generation	Defabrication center
2	Staples, cereals farm	Battery plant	Water purification
3	Animal feed farm	Heavy industry	Trolly & Bus factory
4	Material reclamation	Construction	Plumbing supply
5	Chemicals, farm	Insect Breeding farm	Synth Factory
6	Chemicals, industry	Brewery	Foundry
7	Chemicals, medical	Vineyard	Concrete / Geopolymer factory
8	Chemicals, homegoods	Grow farm for psychedelics	Aerospace manufacturing

Translation Notes

Within this manual, translations of indigenous languages are sometimes used. For instance, the name of the new union formed by western & mountain states – Oyate Ni'na Tan'ka Makobdaye ka Heitanka – was performed using the site dictionary.swodli.com. This resource is a digitized reference for the English-Dakota Dictionary published in 1902 by the American Tract Society and reprinted in 1992 by the Minnesota Historical Society, and the English to Dakotah Dictionary, As Spoken By the Sisseton-Wahpeton Oyate, written by SWODLI and the Sisseton-Wahpeton Treasured Elders, and published by SWODLI in 2015.

This game assumes a measure of success in the efforts to protect and grow the cultural and linguistic traditions of indigenous groups, and GMs are encouraged to draw from the languages of indigenous groups to reflect this when appropriate.

This can be challenging. First, these cultures and languages were subjected to genocide along with the people who carry them, so they're not nearly as well documented as most languages in widespread use today. But also, there is an understandable reluctance to use them out of fear of misusing them or disrespecting the people who carry them. However many intrepid scholars, archivists, teachers, and elders have worked to reverse the loss of these cultures, and it is advised that GMs use these tools to name places and characters in their games in order to bring these words back into the world. It is advisable that GMs exercise cultural literacy and sensitivity in representing any culture, but overall it's our belief that we can do more to honor the people working to restore these languages and cultures by studying their work and using it to tell stories than we do by putting it behind glass.

An atlas of historical indigenous territories can be found at https://native-land.ca. An online dictionary for the Shoshoni language can be found at https://shoshoniproject.utah.edu.

Random Name Table

The table below is primarily for making names for synth characters, but it can be used for humans and parahumans as well. Roll a d10 for column and then for row. Repeat.

	1	2	3	4	5	6	7	8	9	10
1	Moon	Power	Ivy	Rust	Thyme	Tape	Chord	Quercus	Skates	Skunk
2	Sun	Watt	Dandi	Rock	Basil	Deck	Note	Fraxinus	Wheels	Raccoon
3	Wind	Chip	Cactus	Bolt	Chilli	Disk	Melody	Rhus	Hoof	Squirrel
4	Wave	Wire	Vine	Salt	Sage	Card	Harmony	Chaparral	Leap	Opossum
5	Storm	Diode	Maize	Chain	Cilant	Quill	Verse	Toyon	Rush	Bat
6	Beam	'Cuit	Tatsoi	Gull	Soap	Tats	Steps	Eriogonum	Stride	Garter
7	Cloud	Pylon	Spud	Brine	Mint	Stamp	Speaker	Sambucus	Glide	Copperhead
8	Star	Duct	Thistle	Slick	Ginger	Ping	Mosh	Stipa	Swim	Coyote
9	Snow	Ohm	Valeri	Buoy	Cumin	Plug	Slam	Olea	Plunge	Sea lion
10	Dust	Volt	Dock	Jet	Saffy	Key	Beat	Chitalpa	Roll	Buffalo

NPC skill packages

Some GMs prefer to run NPCs in a nebulous, purely plot driven fashion; for these GMs, NPCs rarely need mechanical statistics. However, for those who do like to maintain the presence of probability in the actions of NPCs, whether for drama or simply the fun of rolling dice, the following skill packages are meant to provide abbreviated simple ability scores for broad character types.

Think of an electronics repairer with a sideline as a hacker, for instance. It's reasonable that a less technically inclined group of players may visit such a character for assistance, or a less socially conscious group of player characters may rely on such a character as a fence/fixer. This NPC might take the Hacker, Mechanic, and Shady packages. Meanwhile, an independent journalist who reports primarily on social media may use the Investigator and Yenta packages; a doctor may be represented with Educated and two of the Healer package, or an EMT with Responder and Healer.

These packages may also be useful inspiration to players. They are inspired by the broad skills mechanic in Shadowrun character creation and the homeworld skills and campaign packages from Mongoose Traveller.

Player characters start with 49 points split across 7 attributes, and a set number of high, middle, and low skill values to assign. If you have a situation where you want the NPC to roll like a player: assume a base attribute of 7 + skill + 2d10 vs target number (normally 21 for moderate success).

These example skill packages are all set to give an NPC a total of 8 skill points (if you want a "higher level" NPC, just give them the package twice).

Data Hacker:

3	2	2	1
Hacking Software	Assess Tech	Research & Investigation	Hacking Hardware

Mechanic:

3	2	2	1
Physics & Engineering	Assess Tech	Riding & Piloting	Hacking Hardware

Shady:

3	2	2	1
Stealth	Situational Awareness	Acting	Intimidation

Fighter:

3	2	2	1
Combat	Athletics	Intimidation	Care

Investigator:

3	2	2	1
Detection & Analysis	Research & Investigation	Law & Crime	Community Contact

Performer:

3	2	2	1
Acting	Community Contact	Will	Charm

Responder:

3	2	2	1
Situational Awareness	Care	Riding & Piloting	Empathy

Healer:

3	2	2	1
Medicine	Care	Psychology	Chemistry & Biology

Psychic:

3	2	2	1
Psionics	Will	Empathy	Psychology

Add at least one psionic ability (above Awaken)

Creative:

3	2	2	1
Art, Music, & Culture	Community Contact	Acting	Psychology

Educated:

3	2	2	1
History & Geography	Physics & Engineering	Chem & Bio	Law & Crime

Yenta:

3	2	2	1
Community Contact	Detection & Analysis	History & Geography	Psychology

Horticulturist:

3	2	2	1
Wilderness	Chem + Molecular Bio	History & Geography	Will

Random Character Table

Roll a d100 (or a d10 for first digit and second d10 for second digit).

00	Chorus of Wires, a synth who cares for the Vivarium at Lincoln Heights. They are fans of unusual semi-edible fruits.	Skilled at wilderness, Synth Augs of Temperature proofing and a digestive system
01	Jumping Colour, often found with one of her long haired dogs at the Paws Salon on Clifford Street. She does animal work sessions at Preschools all over the city.	Skilled at charm, and knowledge
02	Port Fraxinius, runs the haberdashery on the corner of Gateway Boulevard. He's a good listener, although sometimes secrets bubble up at his Poet's corner performances	Skilled at empathy and dexterity
03	Garter Buffman. Involved in several camping and outdoor clubs in Azusa. Unusually suntanned for a non-humanoid synth.	Skilled at charm. Synth augs of epidermis and endurance
04	Rhussel Olean. Spends three days a week on his Bike Kitchen drifting up and down Adobe Avenue. Is also Building resident union rep for the 'Production artists and designers bikeshop'	Skilled at Wilderness
05	Skates von Spikes. Knowledgeable manager of Clean Sheets Drug Space at Del Ray. Off duty she can be found at her building resident union, or the Baha'i temple.	Skilled at Research
06	Questionable Skunk. Operates out of a room opposite the Sculpture Garden, Cosmo Street. He doesn't ask many questions. He doesn't welcome them either.	Skilled at hacking hardware, endurance and observation
07	Cactus Bronzefinger. Performance set builder at the FabboWoodo workshop, West LA. He has a couple of lemur themed augmentations, that he claims are helpful backstage.	Skilled at hacking software. Augs: tail and low-light vision
08	Punchcard Stipa. A synth that uses 'his' pronouns. He helps out at the Thermophile Spa, Hollywood hills, and has been adapting his chassis to act as a safety officer. That's an ambition currently unfulfilled.	Skilled at hacking software. Synth Augs: Extreme temperature proofing
09	Diskrhust. They split their time between the animal shelter, teaching self defense at the local recreation hall, and monitoring orbital shifts at the Union of Skylands on Norwalk Boulevard.	Skilled at combat

10	Coyote Ace. A name they might yet grow out of, Coyote is at highschool, but has their eye on a empty space on Holt Avenue that they dream of running their own wired haberdashery from	Skilled at assess tech.
11	TurbineThyme is a synth who lives in the basement below New Theater on New Avenue. She's still exploring what her body can do, and where that might lead her.	Skilled at Physics and engineering, strength, dexterity. Synth Augs: Powered
12	Bolt Chitalpa. A coder by arrangement on Hilliard Avenue. He also writes periodically for the Circle of Nations.	Skilled at Assess tec, Coding and software writing
13	Chappie Arral. Purveyor of soap and other homegood chemicals off Whittier. He attends a church of latter-day saints group that meet early mornings in the park.	Skilled at hacking software
14	5 Steps, as he is known, is a wandering preacher, tracing a route between the Hindu Temple, Baha'i church and Protestant Chapel in Culver City.	Skilled at Wilderness
15	Ohm Tatsoi is a practicing doctor and muslim. They are currently feuding with the Vivarium staff over alleged class snobbery.	Skilled at medicine
16	Friendly Marguerita is a synth and coach at a boxing gym at Culver City. They are studied at projecting an authoritative calm amongst angry teenagers.	Skilled at acting Synth Augs: Meditation transference and cybernetic memory expansion
17	EriDuct is a surprisingly old synth usually found holding court at Poet's corner, Torrance. On a good day, she'll tell you about her old lives.	Skilled at acting. Synth Augs: epidermis and digestive system.
18	Hoof Rust is a kite dancer synth, usually found high above Altadena. His broadcasts on high altitude biochemistry are well respected, although his body is far too large to allow access to a regular lecture theater.	Skilled at Chemisty and molecular biology. Synth Augs: Cybernetic broadcast, quick reactions.
19	Slick Basil. Street seller of whatever needs selling, they sometimes can be found with a flower tray outside the Hindu temple in Agoura Hills, although just as often selling bespoke mouthwash at Granry16.	Skilled at situational awareness

20	CopperGreen splits their time between the community kitchen at Orange Grove Avenue, and providing semi-skilled support at power generation sites on the city outskirts. They are deeply interested in seekerism.	Skilled at situational awareness
21	Spud Thistle works the night shift at the Overnight Oats Cafe, and coordinates logistics at the Killer Cereals and Saxon Oats distribution warehouse. They brew a good coffee, and make an unusual potato bread. Not everyone likes it, but those who do love it.	Skilled at wilderness, strength, dexterity, chemistry + molecular bio
22	Foxy Melody can normally be found at the trampoline park. She jokes that it's the closest she can get to the micro G of her childhood in the orbital habs.	Skilled at athletics, strength and dexterity
23	Mint Squall started as an offworld mining robot. After watching his 10845 Earthrise, something clicked, and he got religion. He is in training at the Catholic Cathedral in Downey.	Skilled at will Synth Augs: hammer fist
24	Low-Key Stampy is a retired music producer who lives at the Brentwood Elder center. He dreams of perfectly balanced acoustic practice rooms, floating above Venus's storm clouds.	Skilled at hacking hardware
25	Liquid Snow. Actually a teetotaler, she often works as an VR experience facilitator at the Monterey Park Sex Club. On full moons she's out with the New Animist pagan group, and any spare time she dedicates to her building residency union.	Skilled at hacking software
26	Breeze Tatta spends most days reviewing new growth at the Burbank Botanarium, with a particular interest in metal-accumulating plants. Occasionally rock-climbs, mostly at Malibu Creek Canyon.	Skilled at chemistry and molecular biology Aug: precise dodge
27	Avalanche Sine's purpose is to be a good care worker. They are studious, and perhaps too serious about being the best care worker they can be. They work at an elders home in West Adams, but they're usually shuttling seniors to the nearby Buddist garden or other points of outdoor relaxation in the neighborhood.	Skilled at care Synth augs: strength, dexterity and cybernetic memory expansion
28	Rhox Quill. If you do find her in town, it'll be at the garden supply library on Higuera Street. Otherwise she'll be out tracing and inspecting infrastructure lines.	Skilled at physics and engineering. Aug: claws and enhanced observation
29	Speaker Sole is a bit of a drifter obsessed with rewilding. They are spending a lot of time at the Hackerspace on Barrows Drive, but seem to be secretive about what they are building.	Skilled at situational awareness

30	Tony McGinn is a sommelier and LARPer. Several days a week they stock shelves at the Robusto Wine Distributor's DTLA branch. During the major pagan festivals they attend fae parties as a satyr.	Creative; Performer
31	Jericho Beelzebub is a cyborg deathmetal singer. When they're not performing or hanging out with their kids they're working security at local concerts.	Creative; Fighter
32	ChickCHK-CheCheCheFwoop is the most gossipy parrot south of the 10. Their flock meanders up and down the Crenshaw corridor depending on where the best fruit is blooming.	Yenta
33	Ella Lenore. Secondary school counselor. She has an office in Brightline Secondary in Culver City, but spends most of her working time on assistive home visits.	Investigator; Healer
34	Pan Balltugger. A fae streamer who lives in the Angeles Forest broadcasting ruthless pranks of anyone who crosses their path without showing proper deference to the forest spirits.	Shady, Creative
35	Jimmy "Scrambles" Parker is a three legged min pin that lives in Venice. He sleeps in a boarding house where he's doted on by all the residents, but spends most afternoons wandering just off the boardwalk begging for snacks. He growls unconvincingly at any mild convenience, but is impossible to take seriously.	Yenta
36	Jasmine Singh. A 59 year-old aquamodo kayaker who can be found most days paddling around the kelp forests and byways of the Santa Monica bay.	Responder
37	Wesley Whitler. 27 year-old production engineer at the Southbay Dairy.	Educated, Mechanic
38	Chickenwing. A gregarious 16-year-old goldendoodle. Usually found with their human companion or their canine friends wandering the Cerritos recreation trails. Smarter than their happy-go-lucky demeanor lets on.	skilled in Wilderness, Community Contact and Situational Awareness
39	Gutfeel/Gloria De LaCruz. Journalist with LA Taco on the food and public safety beats. Inspires anxiety in any protector, detective, or restauranteur who finds themselves under their attention.	Investigator, Creative, Yenta

40	Pierre Sedukis. Uncle. Firefighter and chess player.	Educated, Responder
41	Yael Mirriam Goldfarb. Astromodo. Retired aerospace engineer. Lives in a BDSM house in Burbank.	Educated, Educated
42	Chrlorophyte Ali. A 37-year-old aguamodo parent. Does on-site ecosystem tending around the Palos Verdes Horn in the early mornings and lightguards at the a'ipputunkih pool in San Pedro some afternoons.	Educated, Horticulturist
43	PapaPlossive / Gordon Chang. Teaches language arts at the Seal Beach community school.	Educated, Yenta
44	Violent Chiller is a world famous dancer and locomodo busker. When the weather is nice, she can be found with her crew, dancing on busy corners around the city for likes.	Performer, Creative
45	Babby-Maker / Ursula Geller. Family planner. Hangs out at the Modern Comfort lingerie and maternity wear textile shop in Larchmont.	Creative, Creative
46	Chef B /Billam LeCroix runs the highly popular Cooking with Chef B cooking class dinners on Tuesday nights at his apartment floor's kitchen and dining room in West Adams.	Creative, Yenta
47	Danny B Bussin'. Pilots cloud a ferry most days. Hangs out at pilots bars around Burbank otherwise.	Mechanic, Mechanic
48	Tender Nel. Goat shepard. Shepherds their flock around the natural pasture lawns along Wilshire.	skilled in Care, Wilderness, Community Contact, Situational Awareness
49	GoldenDawn-F292. An S5- envoy mountain lion familiar to their neighbors in the Hollywood hills.	Shady

50	Johaan Romanas. A gregarious agriculturist who tends the Olympic Food Forest in Pico-Robertson. Usually helping guests find the right produce any time from sunrise to noon.	Yenta, Horticulturist
51	MegaMeter / Jennifer Yo. An augmented ultramarathoner that spends almost as much time running as sleeping. Loves to challenge themselves to run through high heat and rain. Megameter can be found across the city, and is easy to track by their constant sightings on social media.	skilled in Athletics, Community Contact, Will, Care
52	Fredrick Kline Reaves. Runs kids parties. Puts up the hottest popup playgrounds and kids activities in LA.	Yenta, Matchmaker and Gossip
53	Emmeline Gin is the chair of the LA Hamster Society, and works at the Munroe Small Animals Zoo in Willowbrook.	Educated, skilled in Wilderness

54	Cinnamon Telosa. A gorilla attorney that works primarily for Uprisen Alliance West. Enjoys curling and history documentaries.	Educated, Educated, Investigator
55	BrewFerU / Greg Hassan. Brewmaster at FatBeats Brewery in Watts. When not at work he can be found on one of the sports courts, or a meditation rooftop.	Educated, Creative
56	Electrotherm. A 70-year-old field service engineer for Shoshoni Superconductors. She's based out of East LA, but can show up at any factory or construction site that needs a stone-cold pro to help install or repair superconducting hardware.	Mechanic, Educated, Hacker
57	Olivia Alexandrekos. As the chair of the SoCal Olive Growers Guild, Alexandrekos is known as The Olive King for her humorless and fierce negotiating posture. Can be found touring olive farms around the city and region or near her home in Pico Union.	Educated, skilled in Wilderness and Community Contact
58	Susan Lightfoot. Emcee for the Whittier farmers market Mondays through Thursdays. Her band, Besipeh ha'nii, plays the farmers market and various daytime gigs on other days of the week.	Performer
59	Stella Shine. Teaches contemporary full-spectrum ballet at the Huntington Park Classical Conservatory on weekday afternoons and headlines the Paradise Forest Gentlemen's Club in Frogtown various evenings.	Performer, Performer

60	SolarSailerSteve. Stephen Chen designs and tests solar sailships nine months out of the year. The other three they spend planetside exercising and staying at various brothels around SoCal.	Mechanic, additional skills in Wilderness, Riding/Piloting
61	Mudbug / Sophie Martens. A fearless climate ranger. Trains Tuesdays through Fridays at Camp Pendleton, and shoots dice and plays cards around Laguna Beach otherwise.	Responder x3
62	Rohit Addison. Plays frisbee golf in South Gate when the weather's nice, and trad golf at the Compton Simularium when it's not.	skilled in Athletics
63	Iron Ore serves on the LACOP extreme threat response division. They can often be found playing basketball around Mar Vista with their team, the Basalt Assault crew.	Responder, Fighter, Fighter
64	Abela Michaela. A 112-year-old neighborhood grandmother. Is almost always in her chair in the park outside her building in Pasadena.	Yenta, additional skills in Community Contact, Situational Awareness, Psychology
65	Kiki Garcia is the apprentice of Witch Vidma, an herbalist who lives in the La Cañada forest with the fae. She can	Psychic, Healer

	often be found biking around La Cañada Flintridge delivering parcels for her mentor.	
66	Melody Khan works at the Forbidden Depths sex club on level -9 of the Garibaldi undersea tower in Point Vicente.	Performer
67	Tomatillo is a 22 year old data analyst and resource analyst. They roam across the chaparral from the Inland Empire to Tijuanna in their campervan with their canine companion Liba.	Investigator, Data Hacker
68	Demitritus Papadoulos, sixteen, busks with his marionettes around the markets down the block from his father's delicatessen.	Performer, Mechanic
69	Viscountess Ronnessa of Clan Budedna / Ronna Badeau. Auditor for the LA County Financial Oversight Committee and full-time vampire LARPer.	Educated, Performer

70	Revolution Rez is a pilot with the LA county Fire Department, and a Climate Ranger reservist. Hangs out at the Rave Arcade in Crenshaw and the vat-meat factory nearby where their spouse and their cousin both work.	Mechanic, Responder, additional skill in Wilderness
71	Imam Shayera is usually at the Akber Mosque in the Fashion District downtown. Between 'Asr and Maghrib she can be found visiting elders and the ill around town, often with her daughter Khadija.	Yenta x2, additional skill in Will
72	Adele Poe is a mortician at Clarity Funerals in East Hollywood. She can often be found representing The Order of the Good Death at funerals around town, and picnicking in the Angelus Rosedale Cemetery Forest.	Educated, additional skill in Community Contact, Psychology, Empathy
73	Exper Mental is a loopy biohacker and psychonaut that is always trying out the latest mind expanding new chem or meditation. Spends most of their time close to their apartment in Echo Park, except when they're meeting with friends and colleagues.	Educated, Shady, additional skill in Psychology and Medicine
74	Babs Wingo The Second is a theatrical wrestling champion who teaches performance fight choreography at the East Hollywood athletics center.	Performer, Fighter
75	City Council Delegate Alejandro Delgado, 40, represents Mar Vista on the city council. They can be reached at their district office on Walgrove, although they're often at the Mar Vista farmers market, where they sometimes play bluegrass-hop with their band.	Yenta, Educated, Performer
76	Starburst, synth confectioner. Constantly experimenting with the properties of candy, dependent on others for the actual testing. Has not killed anyone that we know of.	Creative
77	Bliss Foxworth is the offensive coach for the LA Seraphim pro ultimate frisbee team. During training hours, they can	Performer, additional skill in Athletics

	be found at the Colosseum training grounds. Outside training hours, they're often at the Dragon & Meeple gaming tavern across the street on Hoover St.	
78	Seafoam-Avoidance is a self-driving synth jitney based in Elysian Park. They enjoy finding riders that take them far and wide across SoCal. They once drove a fare all the way to Tijuana, and spent the next six weeks taking fares around the city before finding a rider that needed to get to Irvine.	Mechanic
79	Synthesizer Jones. A friendly cyborg physician that specializes in treating VR trauma. Works at the Amanda Gorman Medical Center in Long Beach.	Healer

80	Garnett Silverstein Heinz is a bully-shepard mix known to everyone in Avalon Gardens. She spends most days looking after kids in the park around the block from her family's midrise complex.	skilled in Empathy, Community Contact, Situational Awareness
81	Copperhead Buffalo is a Clothing designer & tie dye artist with a studio out at Old Courthouse, Beverly Hills.	Creative
82	'Possum is a Tabletop game designer, who takes research for combat surprisingly seriously. They can often be found testing ideas at a gym in Pasedena.	Creative, Educated, may break the fourth wall.
83	Stampy Sweet is a bug farmer over at Brewery Burbank. They grow the bug's food too, and are part of the coast guard reserve. Some tease him that this is a summer only interest.	Horticulturist, plus skills in Care
84	Pony Sapphire is a ponygirl in Torrance. She studies passive heat management at UC Channel Islands, and pulls carts up and down the Hermosa Beach Boardwalk in costume on busy nights for fun, exercise, and tips.	Educated, additional skill in Athletics
85	Parsel Bing is a nearly full time Firefighter in Brentwood. He has an interest in seekerism, but barely practices anymore.	Responder, Mechanic, skilled at intelligence
86	Izzy Stardust, teacher and children's performer. When not out and around at parties or hospitals, she may be found reclined at the small pagan temple on Marcel Avenue. On dark days she may tell the story of her broken heart.	Educated, Performer, skilled at wilderness. Aug: bionic heart
87	Rock von Sun is a traveling Optometrist, originally an off-worlder. He is also a fan of amateur theater, which can come through in his assessments.	Educated, Healer, Acting
88	olea key (all lowercase) is a Tattoo & biomod artist with a studio above the dog salon on Pass Avenue. He has worked other roles in the past, but claims to have forgotten most of it.	Creative, Healer Aug: Radiation hardening

89	Plungjet is a Psilocybin farmer and operator of a semi-therapeutic, semi-hedonistic trip-space. On spare days he volunteers at the animal shelter.	Skilled Horticulturist, Psychic,

90	Hollywood Spider-man: acrobatic performer who busks along the touristy part of Hollywood Blvd. dressed as Miles Morales 2199. Sometimes out of town touring with various circuses. Does not respond to anything else when in character. Is always in character.	Performer, Responder
91	Iceray / Raymond Cabling: a general neighborhood fixer located in Beverly Hills. Serves as a protector with the LACOP. Typically found at the West Hollywood park along La Cienega.	Responder, Shady, Mechanic
92	Kelsey Vanezuela. Blind concert promoter and architecture buff. Kelsey lives in the valley, but can be found at the best classical music concerts in Pacifica.	Educated, Yenta
93	Health inspector Grant. Grant Toyota is a health inspector that can show up anywhere in the city. They take their role seriously, but can be a little proud of their own abilities in evidence hunting.	Educated, Investigator Aug: enhanced smell
94	Bison Cowstein, is a Drag Queen in Burbank. In the early hours of the morning, they take on client work in mediation and legal services.	Performer, Psychology
95	Bigsby Manuṣya is a chimp paramedic who lives in Griffith Park with the Manuṣya troupe, but travels all over the city when on EMT duty. They take the lift when they can.	Responder; Healer Aug: bionic heart
96	Benny Goldenrod is a jitney driver based out of Los Felitz. He can be found biking folks around central LA, and at the Slick Duct Bikeshop if its raining.	Mechanic
97	Vina Second carries out Constituent services supporting LA's current congressional reps. She attends muslim, protestant and catholic services in strict rotation. She's good at discrete enquiries.	Educated, stealth
98	Gary Pesci, fish farmer, runs the 'Friday Cathedral of Aquaponics' on Banta Road. He is always keen to link up with new restaurants and will take days to tour the city to find new chefs and food trucks.	Mechanic, Horticulturist, Observation Aug: Claws
99	Polo Rolo, "information trader" of claimed Martian extraction, Gnostic seeker. He is self described as 'skilled at law and crime', but isn't really good at either.	Yenta, Yenta, Educated

NPC Combat Action Starter Packs

Below are a collection of weapon skills that could be used for a variety of character types. Note that they include numerous weapons that aren't among those found in the provided attack descriptions. Ultimately, those weapons and attacks are meant to be a starting point for players and GMs to make what interests them. For some, readers may prefer to simply reskin an existing attack with a new name. But don't be afraid to make up new attacks with interesting effects, and then share them with the developers and community.

An undercover investigator infiltrating a monster breeding group:

Cost	Attack	Range	Weapon	Threat profile	Portability / Concealability
0	Punch	1	No	0	3
1	Sling/Slingshot	5	Yes	2	2
0.5	Nerve Spray Canister	2	Yes	2	2

A trained peacekeeper steward at a large, inebriated, concert

Cost	Attack	Range	Weapon	Threat profile	Portability / Concealability
0	Punch	1	No	0	3
(1)	E-baton	1	Yes	1	2
2	Trained Strike (Comes with E-baton)	1	No	0	3

An trauma investigator called out to a psychotic breakdown.

Cost	Attack	Range	Weapon	Threat profile	Portability / Concealability
0	Punch	1	No	0	3
2	Wrap Staff	2	Yes	1	1

An ecology auditor mapping a sewer complex

Cost	Attack	Range	Weapon	Threat profile	Portability / Concealability
0.5	Rock Pick	1	No	0	1
0.5	Flash gun	4	No	0	2

A representative trying to calm tensions between two feuding hab-blocks

Cost	Attack	Range	Weapon	Threat profile	Portability / Concealability
0	Punch	1	No	0	3
1	Disarm/Pin	1	No	0	3
1	Microdarter Pistol	6	Yes	2	0

A tax auditor investigating claims of waste dumping

Cost	Attack	Range	Weapon	Threat profile	Portability / Concealability
2	Improvised throwable	4	Yes	1	3
0	Claws	2	Yes	1	2

A reservist called out to a biorefinery explosion

Cost	Attack	Range	Weapon	Threat profile	Portability / Concealability
0	Sticky Foam Spray	2	Yes	1	2
0.5	Knife	1	Yes	1	2
0.5	Crowbar	1	Yes	1	1

A reservist called out for a missing child search

Cost	Attack	Range	Weapon	Threat profile	Portability / Concealability
0	Punch	1	No	0	3
2	Sonic Spear	2	Yes	2	1

A beach and parklands warden keeping stakeholders safe

Cost	Attack	Range	Weapon	Threat profile	Portability / Concealability
0*	Chitin Arm	1	No	0	3
1	E-baton	1	Yes	1	2
1	Rifle	6	Yes	2	0

A courier tasked with getting a rare syn-tissue across LA in a storm

Cost	Attack	Range	Weapon	Threat profile	Portability / Concealability
0	Punch	1	No	0	3
2	Gecko Whip	4	Yes	2	1

Preparing Combat Maps

The standard combat maps consist of hexes that each represent 0.75 m in space, and are intended to occupy 0.75 inches. Standardized map sizes are made in relation to standard 8 ½ x 11" print paper sheets. Below are map sizes based on the number of 8.5" x 11" printer pages they require.

Map Size	Printable Dimensions [in]	In-game Dimensions [m]	In-game Dimensions [ft]	Hexes	Area [ft^2]	Area [m^2]
One sheet	10 x 7.5	10 x 7.5	33 x 25'	15 x 10 hex	825 sq ft	75 m^2
Two sheets	16 x 10	16 x 10	53 x 33'	24 x 15 hex	1750 sq ft	160 m^2
Two sheets (Long)	32 x 7.5	32 x 7.5	66' x 25'	30 x 10 hex	1750 sq ft	160 m^2
Four sheets	21 x 16	21 x 16	70 x 53'	30 x 24 hex	3700 sq ft	345 m^2
Six sheets	24 x 21	24 x 21	80 x 70'	36 x 24 hex	5600 sq ft	520 m^2

Printing pre-made maps

To prepare printed copies of premade maps:

1. **Print out a PDF version with the smallest margin your printer will allow**. Because different printers have different dimensions for their printable area, the PDF images extend to the edge of each page, and users are advised to instruct their printer to shrink the page to the printable area.
2. **If the map is a multi-page map, trim off unprinted areas** where they overlap with an adjacent page.
3. **Align adjacent pages.** The edge hexes of adjacent map pages are present on both sides of the seam to ease with alignment. If necessary, a bit of backlighting can assist with aligning adjacent pages. Secure the pages temporarily with masking tape or sticky notes so that they can be adjusted before permanently securing them.
4. **Secure the pages with permanent tape.** Once all pages are satisfactorily aligned, use permanent tape to secure the pages on their back side, and clear tape to secure the seams on the front side.

Preparing maps in a Virtual Tabletop

These instructions are based on Roll20, but should work for other virtual tabletop programs as well.

1. **Import the full map image** without the hex grid overlay
2. **Set the hex grid overlay** using the number of hexes or dimension settings in the table above.
3. **Adjust the size, number, and dimensions if needed.** You may want to compare the hex grid to the gridded map image, but ultimately, set it to your liking.

Designing combat maps

There are many guides online for making combat maps. Here is the approach that we've found effective for this game.

1. **Decide on a setting**: An apartment, a library, a forest, a park, an alley, a museum, a farm, a restaurant kitchen, a locker room, a brewery… whatever.
2. **Search for floor plans** of the environment you have in mind. You can start from scratch if you like, but architecture is a subtle and challenging art. Real-world places are designed with purpose and functionality in mind, and their proportions, exit routes, and layout have a realism to them that is hard to match.
3. **Create a new file in a vector graphics program** in one of the standard sizes listed above. The four sheet size is recommended. You don't need to use the entire space, but starting with less than four pages can be confining.
4. **Paste one or more floor plans into your preferred vector graphics program**, and begin adjusting the size. If you're using a real-world floorplan, try adjusting the size so that a single hex matches a door frame. Then try scaling a bit larger and a bit smaller, and see what feels right.
5. **Start drawing over the floorplan.** Using the floorplan as a general template, lay out the walls, doors and furniture. This process helps make sure barriers and objects align to the hex grid a bit more closely and avoids having objects positioned where it's unclear if they are or are not adjacent or overlapping with a given hex space. In Inkscape and many other programs, you can also convert raster images into vectors.
6. **Share your finished map.** Readers are encouraged to post their combat map to our Lemmy community on SLRPNK.net or wherever else others can find it. Please consider sharing a version with and without the hex grid overlay.

Discerning Success

While many games will classify a strict dice roll that constitutes success, we strongly encourage GMs to avoid perpetuating the expectation among players that a specific number entitles a player to getting the specific result that they may want. Players' rolls will vary substantially based on the number of players in a party, their specific specialties, bonuses they may get from a tool, and the abilities they acquire as they progress in experience. So although a 22 is a reasonable mathematical benchmark for success, we think it's folly to expect GMs to let math boss them around. If players are consistently rolling much higher, GMs should adjust their storytelling to maintain tension and challenge while still reflecting that the players are excelling in their performance.

Additionally, we recognize that some players may prefer to use different dice or systems. And on top of all of that, some d10 dice range from 1 to 10, while others are numbered from 0 to 9. It's for all of these reasons that in our written story modules, we don't present outcomes to dice rolls as specific numbers, but descriptive terms instead. The table below provides recommended values to help GMs interpret the manual.

Total Score	Classification	Example Rolls
12	Decisive Failure	A very low roll (~6) on a very low Ability Score (~6)
14	Failure	A low roll (~7) on a low Ability score (~7) with no modifiers or a low roll and low Ability Score without modifiers, or mediocre rolls and Ability Scores with negative modifiers.
16		
18	Modest Failure	A low roll on average Ability Scores or vice-versa.
19	Minor Failure	A slightly below average roll on an average AS or vice-versa.
20		
21	Neutral	An Ability Score of 11 with a slightly below average roll
22	Minor Success	An average person performing averagely at an unchallenging task
23		
24	Regular Success	A capable person (AS of 11) performing well (roll of 14) An expert (AS of 17) with a bad roll (8).
26		
28	Decisive Success	A capable person (AS of 11) in rare form (roll of ~17 or with a modifier); A proficient person (AS of 14) performing well (~14)
30		
32	Outstanding Success	An expert on a good day or a proficient person at their best. (17 + 17, or 15 + 14 and a +4 modifier)
34		
36	Epic Success	A master at work: a roll of 18 on top of an Ability Score of 19.
38		
40	Legendary Success	This is only achievable with maxed out Abilities, maxed out Skills, an outrageously rare roll AND a modifier bonus on top.

Real-world references

When creating adventures, a lot of flavor can come from using real-world references. Some of these may seem silly, but the natural world follows a lot of rules that most of us don't know about, let alone have the mental capacity to keep track of. Weather, tides, lunar phases, animal migrations, feeding, mating, etc. all are intertwined. Heat, sunlight, rain, wind, foods, and smells all impact large populations. Natural phenomena create skews where a city as a whole may feel more tired, or anxious, or restless, or daring. Most people don't think about these at a conscious level, but if you want to create a cohesive world that reflects a change in lifestyle and attitude in which we're all more connected to our bodies and the environment, it helps to include these things. Trying to do so with roll tables is liable to make environmental conditions that are incongruent and incoherent in ways that we don't recognize consciously but break the sense of immersion. This is why we suggest picking dates, and using almanacs to supply some of these details.

www.openstreetmap.org & https://earth.google.com

One of the nice things about setting a game in our world is that there is no fictional setting with as much backstory and geography as our own world. Much has changed between now and when the game takes place, but the layout of today is a great place to start when looking for places for things to happen.

https://www.wunderground.com/history

Wunderground's history feature allows anyone to see what kind of temperature, humidity, wind, etc. was typical for a location at a given time.

https://phasesmoon.com

It's easy to check and see what time the moon rises and sets, and what phase it's in for a given day. If players want a dark night for something, they should consider this. If they know people who live on Luna, they're probably more likely to notice it in the sky, so telling them when it is and isn't visible helps with that.

https://native-land.ca/

This map of historic lands is useful for finding names and influences in a world in which dispossessed Native Americans have seen much of their land and culture undergo a major renewal.

https://stellarium.org/

This popular free open-source planetarium lets users see exactly what the sky looks like from any location on earth at any time in the past or future.

https://opendivesites.org

Open Dive Sites provides a wiki-style catalog of scuba and freediving spots. These locations have names and exist as known sites because they are places that people find interesting. Obviously, this is useful for telling stories set primarily or entirely underwater, but even when this is not the case, being aware of these kinds of sites is useful. Often, coasts are thought of like national borders, across which we know little and never venture. Despite this lack of cultural awareness, these locations are a part of our landscape, and have huge impacts on where fishing, recreation, and transit takes place. Whether giving characters somewhere to retrieve a dead drop or just somewhere to meet for a friendly chat, existing dive sites can do a lot to add nuance and familiarity to geologic features that are often presented without distinct character.

https://www.ngdc.noaa.gov/gazetteer

This is the NOAA Undersea Gazetteer, and atlas of undersea features. It provides similar value to the open dive sites atlas, but much farther off land. Often, the ocean is depicted on maps as a gigantic, homogenous void. In reality, it has many of the features we have on land: topography, currents, areas that are fertile and flush with life and those that are harsh and unforgiving. If nothing else, this resource can help provide names and inspiration for how people who live off shore think about their lands.

https://anydice.com/

This reference is a bit different, but it provides statistical distributions for various dice rolls. When designing games, it can be useful to be able to tune the difficulty of or probability of an event. This can be a useful way to do so.

Principles and Moves

If you have been GM in the Powered By the Apocalypse, you may be used to having principles and moves to help keep you from getting tired and off track when needing to improvise as fast as the rest of the table. The following are optional, but may be useful:

Principles

Sprinkle evocative details everywhere - what glows, what grows, what's pretty?

Make the world seem real - what's worn/dirty, what's smelling, what's strange?

There's always another bar nearby

Name everyone, make everyone human

Create interesting dilemmas where you can

Be a fan of the player's characters

Destroy your creations, don't protect them

Ask provocative questions and build on the answers

Sometimes, reflect a question back on the players

Moves

Put the spotlight on a character

Ask a silent player to describe the location ahead.

Split the party / reunite the party

Make their lives complicated now

Give them a difficult decision to make

Offer an opportunity, with or without a cost

Tell them the possible consequences and ask

Describe a challenge/villan's action elsewhere

Activate stuff's bad side

How to publish Fully Automated! content

Fully Automated is being released directly into the public domain. That means that anyone can create and share stories, alternate rules, art, or whatever other material they like without needing to pay licensing fees or get approval from anyone. If this interests you, here is advice on how to get started.

Share it freely

Option 1 is to just dump whatever you want on the internet. We recommend readers share content to our Lemmy community at SLRPNK.net, but you're free to put whatever you want on a cloud storage site and share the link.

Join the FA! OG Dev Group

If you'd like to be involved in releasing content authored by the Fully Automated OG Dev Group, reach out. Our organizing structure is informal, but we operate primarily by seeking consensus, and using a majority rules vote for conclusively deciding major decisions like releasing a final draft. To join, just join our Discord Server (linked on our website) or contact us through any of our other channels and express interest. Anyone is welcome to contribute ideas and materials, and if someone contributes in a meaningful and/or regular fashion we then vote to add them to the dev group.

Publish professionally independent of the OG Dev Group

Alternatively, you can publish your own Fully Automated content independently from the OG Dev Group. This could be an independent project or within an alternative developer team. Perhaps you're part of an existing game publisher or would like to write game modules and pitch them to publishers. Maybe you'd like to fork the game and make your own version that is set in a different time or place, and you'd rather have complete creative freedom from us. Feel free. It's impossible for us to know at the time of writing this how active the OG Dev Group will be at the time you're reading it, but open source means open source: do what you wish.

We hope you'll reach out and collaborate if we're still active, but you're under no obligation to. Technically, the license requires you to credit us, but honestly, do we seem like the type to call our lawyer?

Advice for creating conflicts

This was adapted from an ongoing campaign that started with the introductory module of the Corporation cyberpunk RPG, but diverged from the source material immediately because the culture of the future felt so dated in its nihilism. At the time, we had no familiarity with solarpunk as a genre, but after playing a more optimistic version of a cyberpunk game for years we discovered a name for what I felt was strangely absent in the gaming market. But the starting element of cyberpunk remains influential. GMs should consider how much they want to employ cyberpunk as a substrate onto which they write. There are some people who will go out of their way to reject this completely. Books like "Psalm for the Wild Built" provide a great representation of a story that fully rejects cyberpunk. Conversely, many stories – including many RPGs – are now finding new ways to use cyberpunk tropes in a way that moves beyond its capitalist critique roots and explores liberation philosophies. This game is meant to accommodate diverse tastes, but it should be clear that using cyberpunk for inspiration is no taboo. It's a body of work that is familiar, which makes it useful.

People have looked at this game and either asked, "Where's the conflict in a utopia?" or "It doesn't really seem that utopian if there's this much conflict." And we point out that we never claim that this game world is a utopia. If you've read much of it, it should be clear that we reject the concept. If someone wants to, they're free to take any or all of this game and use it for a cyberpunk campaign, if that's their interest. One could make it a dystopia, in the original meaning of the word: a fake utopia masking a sinister reality, often in which comfort or security has been paid for with freedom. That's obviously not our taste, but it's worth stating it directly to free anyone looking to write stories from the burden of trying to live up to some perceived ideal. Banish the thought. Just tell stories. And if they honor life, this is probably a good system to use.

- Imagine a cyberpunk story, but set it in a world where such behavior is aberrant. A wealthy businessman is performing unethical human experimentation. An assassin is hunting freedom fighters. A machine intelligence is paying a gang to steal parts for a doomsday weapon. Take any cyberpunk plothook and simply situate it in a world where such crimes are shocking and uncommon, and accountability for perpetrators and justice for victims is the status quo.

- Think of the dissidents. A group of humans will never be in full agreement. Who disapproves of the status quo? Anarcho-capitalists who wish to return to a form of capitalism? Nativists who disapprove of free migration? Lower class revolutionaries who think the current order doesn't go far enough? Nihilists seeking chaos for entertainment or to prove some point? Imagine anyone intent on imposing their will on others and how they might go about doing it.

- Ask what temptations exist. Who holds power, and what circumstances could lead them to use it in a way that they shouldn't? A scientist might attempt to build a dangerous energy source out of a hubristic insistence that it will benefit society. A chef may hire a spy to sabotage a rival or steal their greatest recipe. The chair of a

food co-op might make a deal behind the membership's back to award a major contract to a blackmailer. Even in paradise, human weakness can always create opportunities for bad actors.

- Consider problems that aren't caused by a person or persons. Accidents, natural disasters, and medical emergencies can create the need for a hero to spring into action without a villain causing the problem.
- Recognize that not all antagonists are villains and every villain has their reasons. There are still disagreements in any world, and instances where justice isn't available. Design the antagonist (or antagonists) so they are the hero of their own story. Consider a problem or moral injury and then envision a righteous crusader unshackled from ethical boundaries. Gravitate towards plausible, interesting conflicts between well intentioned parties whose interests have set them on a collision course. If you go too far and the players decide the antagonist is right, that's not a problem at all. A crisis of conscience leading to the team switching sides is a fun story to play

Miscellaneous

The following articles and presentations don't have any natural place in this manual, but interested us in some way that felt useful enough to share. Some have links to interesting ideas, some neat images. None are meant as direct endorsements of any project or company.

What is Solarpunk? One thing or many? [Solarpunk Stories]

7 Flavours of Solarpunk Setting [BAKEFOLDPRINT]

What Is Solarpunk Architecture and How Does It Fit Into the Built Future? [Architizer]

Agritecture Consulting Portfolio

To Each According to Their Space-Need: Communes in Outer Space [Space Policy]

Porous Public Space: People + Rainwater + Cities [American Soc. of Landscape Architects]

Streets Illustrated: Seattle Illustrated Street Types & Standards [City of Seattle]

Camden's Organisational Design in 2053 [Ian Gilson on Medium]

2022 Utopia Award Nominees [Android Press]