Future Warfare:
Cloning and Genetic Manipulation

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“As our military protects the bloated, pampered masses that make up society, science,
crawling ever forward, unlocks secrets that makes their living even more easier and gives
us the weapons we need to maintain that status quo. The secrets of the genetic code have
truly been unlocked and the gun is no longer the foremost weapon in our arsenal.

“We can’t make you super-human soldier, well, actually we can. Forget the absurdities
of the modern cinema though. You won’t be able to throw tanks around or dodge projectiles
moving three times the speed of sound. We can however make you as strong as the strongest
human and as fast as the fastest human. They are two separate people. You won’t be. We
can also make you as tough, as smart, as wise and as charismatic as the best of the species
as well.”

- Military Introduction to Genetics
Contents

Chapter 1: Cloning

How to Use this Book 4
Cloning and Genetics by Progress Levels 4

Basic Clones

Don’t Laugh, You’re Already Dead Soldier 5
Basic Clone [Basic Clone] (PL 4) 6

Aberrations

Children (PL 0) 9
Maggot Clone (PL 2) [Basic Clone] 9
Mold Clone (PL 2) [Basic Clone] 10
Multiple DNA Clone (PL 7) [Basic Clone] 10
Teleclone (PL 7) [Basic Clone] 10
True Clone (PL 8) [Basic Clone] 11

Clone Upgrades

Accelerated Growth (PL 6) [Clone Upgrade] 11
Accelerated Learning (PL 6) [Clone Upgrade] 12
Adult Clone (PL 7) [Clone Upgrade] 12
Advanced Clone (PL 6) [Clone Upgrade] 12
Alternate Memory Impregnation (PL 8) [Clone Upgrade] 12

Bulk Clones

Fast Clone (PL 7) [Clone Upgrade] 13
Memory Impregnation (PL 7)[Clone Upgrade] 14
Multiple Memory Impregnation (PL 8) [Clone Upgrade] 14

Mutant Clone (PL 6) [Clone Upgrade] 14
Cloning and Death 15

Starting and Restarting as a Clone 17

Chapter 2: Genetics

Re-Sequencing

Chemical/Nanite Re-sequencing (PL 7) [Re-sequencing] 21
Tele-Re-Sequencing (PL 7) [Re-sequencing] 23
Absolute Obedience (PL 5) 24
Acid Sweat (PL 6) [Genetic Modification] 24
Adrenaline Surge (PL 5) [Genetic Modification] 24
Alternate Race (PL 6) [Genetic Modification] 25
Cosmetic Glow (PL 6) [Genetic Modification] 25
Cosmetic Modifications (PL 6) [Genetic Modification] 26
Cybernetic Adaptation (PL 7) [Genetic Modification] 26
Claws (PL 6) [Genetic Modification] 27
Darkvision (PL 6) [Genetic Modification] 27
Elastic DNA (PL 6) [Genetic Modification] 27
Extra Head (PL 7) [Genetic Modification] 27
Extra Limb (PL 6) [Genetic Modification] 27
Equine (PL 6) [Genetic Modification] 28
Ethereal Organs (PL 7) [Genetic Modification] 28
Faster (PL 6) [Genetic Modification] 28
Genetic Scripting (PL 6) [Genetic Modification] 28

Chapter 3: Necro Science and Magic

Undead Clone (PL6) [Basic Clone] 37
The Order of the Modern Dead 37

Spells and Incantations

Create Clone 38
Re-Sequence 38
Shrink 39

Chapter 4: Scientific Labs

Stone Age Lab (PL 0) 41
Bronze Age Lab (PL 1) 41
Middle Age Lab (PL 2) 41
Renaissance Lab (PL 3) 41
Industrial Lab (PL 4) 41
Information Lab (PL 5) 41
Gravity Lab (PL 7) 42
Energy Lab (PL 8) 42
Super High Tech Lab (PL 9) 42
Clone Lab Upgrade (PL 4) 43
Genetics Lab Upgrade 43
Advanced Lab 43
Equipment

Life Detector (PL 4) 43
Memory Tracker (PL 6) 43

Chapter 5: Clones and Creatures

The Microscopic World 44
Examples of Sizes 44
Anti-arrostia Nanite 45
Code Name: Steve, Max Tech Super Soldier 45
Example Clone, John Doe 47
Gene-Reader Nanite 48
Krix Bat (Poisonous Mutant Bat) 48
Predatory DNA 48
Re-Sequencer Nanite 49
Massive Aberrations 50

Chapter 6: Modifying Genetics with Skills and Feats

Cloned 51
Genetic Contact 51
Undetectable 51

Chapter 7: Modified Clones of Advanced Classes

Military Clone 52
Neo Geneticist 53
Can’t Afford Genetics, Join the Army! 53
Sidebar: Generating Children Based on Parents 11
Story: 50 000 Clones, 100 000 Dead Men 13
Story: Why I Hate Cloning 15

Maximum Lost Wealth DC (Optional Rule) 15
Souless Clones (Optional) 16
Genetically Scripted Spellbooks 29
DNA Reader (PL 5) 29

Traits: Where Did My DNA Come From? 35
Story: Dead Again 38

Purchasing a Higher Progress Level Lab 43
Missing Super Soldier – A journalist’s report 47
Monoculture, the Fall of Alpha Centauri 50
The Darwin Project 51
Chapter 1: Cloning

How to Use this Book

This book deals with cloning, genetics and the microscopic world. Clones and genetic modifications are purchased much like equipment. They have a purchase DC, progress level availability and may have purchase restrictions. Unlike equipment, a lab is required, the process takes a certain amount of time and there is a chance of aberrations in the subject.

When you purchase a clone, you purchase a basic clone and possibly one or more upgrades. When you purchase a genetic modification it is applied to a fertilized embryo (which may be a clone) or, if you have access to genetic re-sequencing, it may be applied to an already grown subject (such as an infant, child or adult, who may be a clone).

Table 1-1: Cloning and Upgrades

<table>
<thead>
<tr>
<th>Clone/Upgrade</th>
<th>Creation Time</th>
<th>Level Adjustment</th>
<th>Chance of Aberration</th>
<th>Purchase DC</th>
<th>Res</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Basic Clones</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basic Clone</td>
<td>10+1d4 mths</td>
<td>1st level</td>
<td>5%</td>
<td>35 (PL4)</td>
<td>Lic (+1)</td>
<td>Industrial Lab (PL 4) or Information Lab (PL 5) plus Clone Lab Upgrade</td>
</tr>
<tr>
<td>Children</td>
<td>7+1d4 mths</td>
<td>+0 levels</td>
<td>0%</td>
<td>0</td>
<td>—</td>
<td>None</td>
</tr>
<tr>
<td>Maggot Clone</td>
<td>Special*</td>
<td>1st level</td>
<td>2%</td>
<td>*</td>
<td>*</td>
<td>Middle Age Lab (PL2) plus Clone Lab Upgrade</td>
</tr>
<tr>
<td>Mold Clone</td>
<td>Special*</td>
<td>1st level</td>
<td>2%</td>
<td>*</td>
<td>*</td>
<td>Middle Age Lab (PL2) plus Clone Lab Upgrade</td>
</tr>
<tr>
<td>Multiple DNA</td>
<td>10+1d4 mths*</td>
<td>1st level</td>
<td>4%*</td>
<td>30*</td>
<td>Lic (+1)</td>
<td>Gravity Lab (PL7) plus Clone Lab Upgrade</td>
</tr>
<tr>
<td>Teleclone</td>
<td>1d12 hrs (PL7)</td>
<td>+0 levels</td>
<td>4% (PL7)</td>
<td>30</td>
<td>Mil (+3)</td>
<td>Energy Lab (PL 8) plus Advanced Clone Lab Upgrade</td>
</tr>
<tr>
<td>True clone</td>
<td>24 hours</td>
<td>+0 levels</td>
<td>1%</td>
<td>30</td>
<td>Mil (+3)</td>
<td>Energy Lab (PL 8) plus Advanced Clone Lab Upgrade</td>
</tr>
<tr>
<td><strong>Upgrades</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accelerated Growth</td>
<td>+0 months</td>
<td>+0 levels</td>
<td>+1%/5yrs</td>
<td>15+1/yr</td>
<td>Mil (+3)</td>
<td>Fusion Lab (PL 6)</td>
</tr>
<tr>
<td>Accelerated Learning</td>
<td>+0 months</td>
<td>+0 levels</td>
<td>+0%</td>
<td>15+1/yr</td>
<td>Mil (+3)</td>
<td>Fusion Lab (PL 6)</td>
</tr>
<tr>
<td>Adult Clone</td>
<td>+0 months</td>
<td>+0 levels</td>
<td>+0%</td>
<td>+1</td>
<td>Mil (+3)</td>
<td>Gravity Lab (PL 7) plus Advanced Clone Lab Upgrade</td>
</tr>
<tr>
<td>Advanced Clone</td>
<td>-1 months</td>
<td>+0 levels</td>
<td>-2%</td>
<td>+2</td>
<td>Lic (+1)</td>
<td>Fusion Lab (PL 6)</td>
</tr>
<tr>
<td>Alternate Memory</td>
<td>Special</td>
<td>-3 levels</td>
<td>2%</td>
<td>35 (PL 7)</td>
<td>Ill (+4)</td>
<td>Energy Lab (PL 8) plus Advanced Clone Lab Upgrade</td>
</tr>
<tr>
<td>Bulk Clones</td>
<td>+2 weeks</td>
<td>+0 levels</td>
<td>+5%</td>
<td>+1/clone</td>
<td>Mil (+3)</td>
<td>1 lab per 12 clones</td>
</tr>
<tr>
<td>Fast Clone</td>
<td>-1 to -9 Months</td>
<td>+0 levels</td>
<td>+1% per -1 month</td>
<td>20 +1 per -1 month</td>
<td>Mil (+3)</td>
<td>Gravity Lab (PL 7)</td>
</tr>
<tr>
<td>Memory Impregnation</td>
<td>Special</td>
<td>-2 levels</td>
<td>+1%</td>
<td>+30 (PL 7)</td>
<td>Mil (+3)</td>
<td>Gravity Lab (PL 7)</td>
</tr>
<tr>
<td>Multiple Memory Impregnation</td>
<td>Special</td>
<td>-1 level/donor</td>
<td>+1%/donor</td>
<td>30 (PL 7) or 25 (PL 8+), +1/donor</td>
<td>Ill (+4)</td>
<td>Energy Lab (PL 8) plus Advanced Clone Lab Upgrade</td>
</tr>
<tr>
<td>Mutant Clone*</td>
<td>+0 Months</td>
<td>+0 levels</td>
<td>-2%</td>
<td>+1</td>
<td>Res (+2)</td>
<td>Fusion Lab (PL 6)</td>
</tr>
</tbody>
</table>

Cloning and Genetics by Progress Levels

**Progress Level 0-2 (Stone Age-Bronze/Iron Age):** Only the most basic representation of cloning and genetics occur in this age; reproduction and evolution.

**Progress Level 2 (Middle Ages):** Genetic manipulation occurs in the way of breeding animals. It is a slow method but very successful over hundreds of years, producing many different varieties of dogs, cats and other animals. For settings with magic, magical studies into cloning begin. Mutations and other failures create pressure to such experimentation. The alchemists and spellcasters are aware they can change a creature and that its offspring may retain those changes, but they have no understanding of genetics.

**Progress Level 3 (Age of Reason):** Breeding becomes more sophisticated in this age with more deliberate efforts to develop certain traits. Limited experiments in human breeding may occur but the time required to see results of such experiments takes...
hundreds of years. For settings with magic, this is often the height of magical cloning and genetics. Having survived the middle ages, cloning is slightly more acceptable because it is more successful.

**Progress Level 4 (Industrial Age):** The concept of cloning appears in science fiction and scientific hypothesis. Scientists discover DNA and more serious human breeding projects occur. The morals of delving into the genetic code are questioned. Manipulation of simple plants becomes common place near the end of this age.

**Progress Level 5 (Information Age):** The first cloning occurs with animals. By the end of this age human cloning is possible. The modification of plants and animals, especially for commercial use becomes common.

**Progress Level 6 (Fusion Age):** Cloning and genetic manipulation become more reliable and predictable and, as a result, more accepted. The first experiments with memory retention occur, but all clones are born as infants and must be trained. Simply genetic modifications to existing subjects occur.

**Progress Level 7 (Gravity Age):** The first cloned adults occur. Memory mapping and impregnation allow the creation of clones with original memories. Complete genetic re-sequencing on adult subjects occurs. Much of this technology is still new and is ‘pushing the limits’. Some disastrous results occur as new methods of cloning and genetic manipulation are explored. Near the end of this age the first clones created complete with original memories are created. This progress level also sees regular use of transgenics, genes taken from another organism and put into a subject. Started in the fusion age, transgenics becomes a staple of genetic manipulation and as much work is put into finding new races as modifying known ones.

**Progress Level 8 (Energy Age):** Cloning and genetic manipulation can be done as quickly as putting on, or taking off clothing. Soldiers can be modified on the battlefield to adapt to changing conditions. In the unlikely event someone is killed, they can be cloned and back to work in minutes. Armies of trained clones can be produced in hours. Some militia only create soldiers immediately before a battle and then render them down into components afterwards.

**Progress Level 9:** Cloning and genetic manipulation are obsolete terms. Serious modifications occur on a subatomic level creating entirely new life forms. Creatures no made from atoms appear.

**Multiple Pricing:** In different progress levels certain technologies become more reliable, and cheaper. When deciding which price is used, use the average progress level of that world. Even if technology from higher progress levels is available, the cost will reflect the average progress level.

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### Basic Clones

**Don’t Laugh, You’re Already Dead Soldier**

Soldier, before you toss aside this field manual like an old newspaper, consider this; Many militaries routinely use cloned soldiers and provide genetic upgrades without informing anyone without a need to know. Did you read all of your enlistment contract? Do you have gaps in your memory or have you spent any significant time in a hospital? Have any of your fellow soldiers? Are there units in your army you have never met? Perhaps they are exact copies of your unit. Have I got your attention yet soldier?
Now, should you be worried? No, you should not. The military is simply using the most advanced technology available to them. They are trying to keep you alive and make you the most effective fighting machine you can be. The fact that they have not told you simply means they are denying this knowledge to the enemy.

If you are interested in genetic upgrades, first ask your superior officer about the topic. Be aware that he may ask you not to talk about this subject again. You may be approached in the future or receive upgrades without your knowledge. In some militaries knowledge of cloning and genetics is common knowledge and you may be able to investigate obtaining upgrades. After all, don’t you owe it to yourself and your country to be the best soldier you can be?

Creating Clones: When you create a clone you must select a basic clone, noted in the brackets after the name of the clone. Clone upgrades are then added. Clone upgrades must be purchased at the same time as the clone, unless they say otherwise in the description. Basic clones have a purchase DC. Most upgrades have a purchase DC modifier. Upgrades that are added after the clone is created have a purchase DC.

Level Adjustment: Like being magically raised from the dead, cloning causes a loss of levels. Each clone takes time to come to terms with his new life, possibly the death of the original or even dealing with a living original. Add the level loss for the base clone type and all the upgrades to determine the total level loss. This loss of levels can never reduce a clone below 1st level.

Chance of Aberration: Playing god is never without risk. There is always a chance of a mishap in the DNA or growth that causes an aberration. The chance is based on the base clone type and modified for the upgrades applied. The minimum chance is 1%. Roll when the clone is born, although the defect might not be apparent until maturity. If an aberration occurs, roll on Table 1-2: Cloning Aberrations. Clone upgrades applied after the clone is created may also cause aberrations. In this case you will need to roll the new percent chance to see if an aberration occurs.

Base Purchase DC: This is the cost of the clone. Add the purchase DC modifier of all the chosen upgrades to the purchase DC of the basic clone to determine the final purchase DC.

Upgrades that are added after the clone is created are paid for separately. They have a purchase DC, instead of a purchase DC modifier.

Requirement: Creating clones requires a lab of some kind. Your lab must meet the highest requirements of your basic clone and upgrades.

Government Property: Be aware soldier that most clones are government property. That said, clones have all the rights and privileges every soldier enjoys. While it is possible for civilians, especially corporations, to produce clones much of the technology and advancements are in the hands of the military. Non-military clones tend to be simple replacements, a fad among the rich and little more. A handful of enterprising freelancers arrange for advanced cloning and genetic procedures, either through suspect contracts with corporations or legitimately through limited contracts with the military. In the latter case they often receive first chance at military freelance contracts because they are sporting the latest in cloning and genetic advances.

Basic Clone [Basic Clone] (PL 4)

The basic clone is the simplest form of humanoid cloning. There are no modifications to the original. It spends nine months as a fetus in a womb. At higher prowess levels the womb may be artificial. Clones of non-mammalian races develop in their normal fashion.

The clone is born as an infant with no memories from the original. The clone is born as 0th level. When the clone is old enough to gain class levels, the clone starts at 1st level. Clones must pay for racial levels normally.

A sample is taken from the original to make the clone. Any genetic modifications done to the original, before the sample is taken, will appear in the clone. This includes genetic diseases and conditions, including lycanthropy and curses. Cybernetics, permanent spells or psionic powers and any effect that ends with death is not retained by the clone.

Ability Scores: A clone has the same ability scores the as original’s base ability scores, before any modifiers, plus any racial modifiers. (Characters who do not have all their racial levels may not have all their racial modifiers to ability scores yet.) To determine the original’s base ability scores, remove all bonuses, such as enhancement, inherent or equipment bonuses from temporary or permanent spells or psionic powers, magic items or cybernetic implants. This even includes the benefit of a miracle or wish spell. Also remove any ability score increases granted every four levels and any modifiers for age.

The clone modifies these base scores normally as the clone ages, gains levels, has spells or powers applied, uses magic items or receives miracles or wishes.

Lifespan: A basic clones does not live as long as
the original. Find the maximum age for the original. Subtract the age of the original when the sample was taken. That is the maximum age of the clone. The clone does not enter middle age, old age, or venerable ages sooner, the clone’s life span is simply shorter. For example, a 60 year old human, who’s maximum age is 100, creates a clone. That clone will reach middle age 35 years after birth but will die at 40.

Samples can be frozen and stored and do not age. They can be used decade, centuries or even millennia later, if the storage facility survives that long.

At progress level 5, cloning is in its infancy. Roughly 90% of attempted clones fail, dramatically increasing the cost of cloning. Combined with common defects in the clones that do survive, cloning humanoids at this progress level is illegal.

**Restrictions:** The basic clone may be an animal, fey, giant, humanoid, monstrous humanoid, vermin. The basic clone may not be an aberration, construct, elemental, ooze, outsider or undead. The clone may be a magical beast but a spellcaster able to cast 3rd level spells is required to oversee the cloning process. Such a spellcaster can oversee the creation of up to 12 clones at the same time.

**Action Points:** Basic clones start play with action points for their highest level only.

**Reputation:** Basic clones start play with a normal reputation based on their level and any relevant feats.

**Creation Time:** 10+1d4 months.

**Level Adjustment:** Clone starts play at 1st level.

**Chance of Aberration:** 5%.

**Base Purchase DC:** 35 (PL 4) or 25 (PL 5 or higher).

**Restriction:** Licensed (+1).

**Requirement:** Industrial Lab (PL 4) or Advanced Lab (PL 5 or higher) and Clone Lab Upgrade.

### Aberrations

Aberrations are the occasional side effect of modifying DNA. When a clone, or genetically modified child is born, or otherwise created the Game Master rolls once to determine if that person has an aberration. The chance of an aberration is the total percentage from any basic clone, clone upgrades and genetic modifications the character has.

**Table 1-2: Aberrations**

<table>
<thead>
<tr>
<th>3d10</th>
<th>Aberration</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Ability Score Penalty: Strength</td>
</tr>
<tr>
<td>4</td>
<td>Ability Score Penalty: Dexterity</td>
</tr>
<tr>
<td>5</td>
<td>Ability Score Penalty: Constitution</td>
</tr>
<tr>
<td>6</td>
<td>Ability Score Penalty: Intelligence</td>
</tr>
<tr>
<td>7</td>
<td>Ability Score Penalty: Wisdom</td>
</tr>
<tr>
<td>8</td>
<td>Ability Score Penalty: Charisma</td>
</tr>
<tr>
<td>9</td>
<td>Duplication</td>
</tr>
<tr>
<td>10</td>
<td>Enzyme Imbalance</td>
</tr>
<tr>
<td>11</td>
<td>Limb aberration</td>
</tr>
<tr>
<td>12</td>
<td>Madness: Odd Behavior</td>
</tr>
<tr>
<td>13</td>
<td>Madness: Paranoia</td>
</tr>
<tr>
<td>14</td>
<td>Madness: Phobia</td>
</tr>
<tr>
<td>15</td>
<td>Madness: Split Personality</td>
</tr>
<tr>
<td>16</td>
<td>Not as tough</td>
</tr>
<tr>
<td>17</td>
<td>Prone to illness</td>
</tr>
<tr>
<td>18</td>
<td>Saving Throw Penalty: Poor fortitude</td>
</tr>
<tr>
<td>19</td>
<td>Saving Throw Penalty: Slow reflexes</td>
</tr>
<tr>
<td>20</td>
<td>Saving Throw Penalty: Soft will</td>
</tr>
<tr>
<td>21</td>
<td>Senses: Blind</td>
</tr>
<tr>
<td>22</td>
<td>Senses: Deaf</td>
</tr>
<tr>
<td>23</td>
<td>Senses: Mute</td>
</tr>
<tr>
<td>24</td>
<td>Senses: Without smell</td>
</tr>
<tr>
<td>25</td>
<td>Senses: Without touch</td>
</tr>
<tr>
<td>26</td>
<td>Shortened lifespan</td>
</tr>
<tr>
<td>27</td>
<td>Waterbreathing</td>
</tr>
<tr>
<td>28-30</td>
<td>Roll again twice</td>
</tr>
</tbody>
</table>