

CONTINUUM

A field guide for Intergalactic Explorers

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Look kid, we didn't blow any houses down.



REPORT ON ORIGINS '87

The following had its base written by Michael R. Mikesh with editing, changes, and additional comments added by Herb M. Petro. Everything below was gleaned from seminars and discussions from Origins '87 and is correct to the best of the editors knowledge. Even though essentially written by two persons, the pronoun 'I' is used below. When it makes a real difference (as in authorship of an article, or a differing of opinions), the actual person is listed in brackets.

TRAVELLER --

The first of the Traveller seminars was the Traveller 10th anniversary party. All the heavies from GDW, Digest Group, the Keith brothers, and Seeker (the newest licensee of Traveller; with big plans) were up there. After introductions, they dragged out a big cake, quick ceremony/speech, and we mixed. The time was primarily used to discuss design ideas with players and refs. It was immensely productive.

Task System --

One thing pointed out in the speeches was that Traveller was the first to introduce the skill based system. Now, at its tenth year mark, it's the first to introduce the task system. All the designers enthusiastically heralded the task system as the most significant advancement in RP gaming in recent years. I've used it in my games, but it wasn't until Origins that I realized the system's significance.

Mounds of game rules suddenly disappear. Everything is described as a task whether you're trying to persuade a guard, pick a lock, jump a gap, fix a boat, or engage in combat. The game is fit into the task system and the complication goes away. Beautiful. No flipping through the rules for high-wire walking. The task system makes things so easy and obvious that the ref can come up with very credible rules on the fly.

Other recent games are borrowing from the task system, even Star Wars RPG. Their task systems, however, are rather underdeveloped.

MegaTraveller --

MegaTraveller is a revision of Classic Traveller. It remains Traveller, however. Traveller: 2300 (suggested that it just be referred to as '2300') is wholly apart. But MegaTraveller and Classic Traveller are the same. Old campaigns can go right on under the new rules, with virtually no translation.

What GDW and Digest Group are doing is reviewing everything, the old rules, supplements, module rules, articles, feedback, etc., and condensing it into a 3 book set (Player's Book, Ref's Book, and Encyclopedia; out Sept, Oct, & Nov, respectively). In the process, they're cleaning everything up so that it really runs fine. Here's what we've learned about it so far:

1) As mentioned above, everything is going to be defined as tasks.

2) The new combat system borrows a lot from both Striker and Azhanti High Lightning.

3) Many weaponry skills are reduced to classes such as Handgun, encompassing pistols, revolvers, etc. (as in the current adv. books)

4) Characters now have hit points more akin to Traveller animals. Hits to unconsciousness and hits to kill. These are still derived from strength, dexterity, and endurance.

5) Characters do not take "dice of damage". They take "hits". Under the old system, a gauss rifle might do 4D6 damage. Now it does 4 hits. I am somewhat unclear about the details of this portion.

6) Each attack is two part. When the attacker fires, he rolls for success by rolling with his bonuses only. (Evasion, cover, armor, and range penalties are not dealt with). THEN the defender rolls to avoid being hit, using evasion, cover, armor, and range bonuses to his advantage. Playtesting has shown this method to be outstanding in that things become less confusing.

7) There is an interrupt rule in the combat system. As best as I can understand, its like opportunity fire or maybe even a snap shot. The point is that even if you've done your action for the round, you have a chance of doing something more if need be, perhaps at a cost to the next round.

8) The character generation system includes both basic and advanced (like Mercenary) components. It will include eighteen term-by-term professions (six basic plus twelve from Citizens) and the year-by-year charts from books 4-7. There will be many more cascade skills in the character generation system. For instance, if you rolled "black skill," the list you might choose from could include gambling, bribery, forgery, streetwise, or brawling. Characters generated term-by-term will now be indistinguishable from those generated year-by-year, as the 'term' characters will be receiving more skills.

9) The basic starship combat system goes away, replaced with the High Guard system.

10) No more 'starship construction' and 'vehicle construction'; instead 'Transportation Construction.' You create any type of vehicle from fly cycles to dreadnoughts with one system. Its a derivative of the Striker system and High Guard.

11) The experience system is improved. I don't know specifics, but as adventuring years go by, a given character accumulates skills in much the same quantity as if he remained in a service.

12) Book 0 - Introduction to Traveller, Traveller Starter Set, etc. goes away. GDW will no longer make an effort to introduce people to RP gaming. It seems universally true that people are introduced to the game by being indoctrinated by a gaming group. They do not pick up a set and start refereeing it for their friends without having played an RPG somewhere else first. [Specific Herb Petro comment: "I seem to be an exception to that universal truth."]

Seeker --

Seeker is the newest Traveller licensee, much as was FASA and Gamelords a while back. They're going at Traveller in a big way. They've taken over all the old unprinted FASA material and will reprint it in the MegaTraveller format a little at a time. They also bought up the unpublished Gamelords stuff and will be doing likewise, including a product Gamelords fell just short of printing, "Letter of Mark." This focuses on piracy and privateering. (The intrusion skill -- lock picking, safe cracking -- will be introduced in this.)

Seeker has an official GDW sector for its adventure settings. Called the Gateway sector, this was once called the Maranantha-Alkahest sector (Judges Guild) and then the Tagret Sector (in Pegasus). This sector will be generated anew. (Strangely, when I complained, a fanzine article suggesting space be made three dimensional by putting the new sectors on a different plane was mentioned. I [Mike Mikesh] wrote the article, so I guess people are reading my stuff.)

STAR WARS ROLE-PLAYING --

I was very excited about hearing this, so I sat through the seminar to see what was coming up [both Mike and Herb did].

Lucas Films is pouring a GREAT deal of backing into the Star Wars RPG (release: late 1987). West End Games is visibly flabbergasted by all this, and I think they're wondering if they can stack up to the expectations of that film giant. From what I heard, I think they can and have.

Its impressive. The game is based on EVERYTHING that is Star Wars (including even the Star Wars Marvel Comics) except that which conflicts with the movies. West End has access to things that never got into print or onto the silver screen. It'll sell big, but its a game meant for Star Wars fans, and not so much the gamer hobbyists.

Star Wars RPG is pure space opera. Pure. They didn't worry that much if the rules were rational. For instance, space combat is just fast, not for the serious tactician. EVERYTHING was directed at capturing the Star Wars movie atmosphere even at the cost of it being a good game.

I have some particular problems with it. Foremost is that West End was forbidden to create new material. Lucas Film wanted the game to have absolute fidelity (their seriousness about it is that great) so as to not conflict with the new

upcoming trilogy. This is a big disappointment in light of Middle Earth RPG's success in adding so much detail to Tolkein's universe.

Second is that PCs are part of the Rebellion. They take orders from the Rebellion commanders. If the PCs don't want to follow their instructions, that's okay. Events force them to go along anyway. The campaign is defined by the referee with little player input. I don't like this because the players do not have influence over the broader course of events (as they do in my Traveller campaign). This failing probably is actually a spin-off of the first problem because a free-willed player group is otherwise too likely to wander into undeveloped space.

Third, there aren't many referees whose styles can support Star Wars space opera for an extended period of time. Star Wars requires a particular referee style. Those that have it can dissolve the funneling problem just mentioned. Star destroyers showing up at a critical time would then feel like a natural event instead of a GM intrusion. But for those that can't master the Star Wars space opera style, the game goes flat.

In any case, I'm very glad to see Star Wars RPG coming onto the market. It's going to introduce a lot of people to SF role-playing, which then, hopefully, will generate more enthusiasm for the ORIGINAL and BEST SF-RPG -- Traveller.

NEWS, UPDATES, AND GENERAL INFO

Gregg Giles has combined the Security Leak Fanzine and the Security Leak Newsletter. The combined publication should be referred to simply as Security Leak. Gregg Giles has also moved. His new address is: 4200 Park Place 217; Tyler, TX 75703.

I've spoken to Magnus Abel of Between Worlds since Continuum #2. He informed me of all his printing troubles and delays. He asked me to mention to everyone that he is still alive, and will be getting the next Between Worlds out when he can. Magnus is a good fellow, so I ask everyone to be patient.

If anyone took note in Continuum #1, I never said that Continuum was devoted exclusively to Traveller. "You never know what you'll find in Continuum!" (as the motto says), and that is how it is. As my focuses change, Continuum will go along with me. If at anytime someone does not like where Continuum is headed, I will give a refund.

The subtitle of Continuum has been changed to "A field guide for Intergalactic Explorers." The definition of the word "continuum" is quite general, reflecting the nature of material that may appear here.

I am working on getting a discussion on time and dimension travel going in Continuum. I am currently following up on several sources and persons that may be useful in this. These sources include a former round robin hosted by Al McIntyre concerning time travel and some information distributed at Origins by Greg Porter.

YOU MAILING LABEL

More than likely you are receiving this in the mail and there is a mailing label on the outside. Above your name there should be two numbers. The first number represents the number of the last issue you will receive. The second number is the amount of CCR you have accumulated. When your subscription runs out, if there is any

CCR, then the CCR will be converted to issues at 1 issue for every 3 CCR.

SUBMISSIONS

Continuum will take a variety of articles about a multitude of subjects for any number of games. Payment is 1 CCR per half page written and from 1 to 4 CCR for artwork (depends on size and quality).

CCR (Continuum Credit)

CCR is paid for submissions. CCR can be converted to Continuum issues or can buy other booklets, etc. that Continuum Publications may produce. Below is a list of current Continuum Publications products.

| ITEM | \$\$ | format | pages | author(s) | date of publication |
|--------------|------|--------|-------|-----------|---------------------|
| CONTINUUM #1 | 4 | 2b | 16 | several | March 1987 |
| CONTINUUM #2 | 4 | 2b | 12 | several | June 1987 |
| CONTINUUM #3 | 4 | 2b | 12 | several | August 1987 |

HPCGS (a point system for Traveller character generation that is temporarily out of print pending a revision to conform to the new MegaTraveller rules)

** is equal to CCR, 1 CCR = 25c cash; 4 CCR = \$1.00

Format types:

- 1a-b = 5.5" x 8.5" pages created by folding 11" by 8.5" sheets in half: a-spine stapled (digest format, like old JTAS); b-stapled down left side
- 2a-d = 11" x 8.5" sheets: a-not stapled; b-top left stapled; c-stapled across top; d-stapled down left side
- 3a-b = 11" by 17" sheets folded in half: a-spine stapled; b-stapled down left side.
- 4a-b = 11" x 8.5" sheets gummed binding (like World Almanac): a-bound at top; b-bound at left side
- 5 = Computer printout

If an asterisk precedes the format type then that item is plasticized (not exactly laminated, but something like that).

REVIEWS

TIMELORDS

TimeLords (Blacksburg Tactical Research Center, 4415 Sprenkle Lane, Richmond, VA 23228: one hundred twenty two 8.5" by 11" pages with BW + two color cardstock cover: \$10.00, 1987)

I found this game at Origins. While drifting and browsing I ran across the BTRC stand. The author of TimeLords (Greg Porter) gave a great sales pitch, and since it wasn't expensive, I went ahead and bought the game. I was pleasantly surprised to find how much I liked the game. Later, while going through my schedule, I was again pleasantly surprised when I found that the seminar on time travel I had already planned to attend was being hosted by the same Greg Porter.

TimeLords is a time travel role-playing game. Player's can either play themselves as free adventurers dragged into other times and realities or can play the role of an agent in the Time Patrol. There are too many aspects of this game to list them all, but it is a complete game having sections on vehicles, drugs, creatures, psionics, environments, world generation, etcetera.

Though most die modifiers and the like are rolled and determined linearly, they are applied in a curve using a chart reducing each number to actually a percentage change of the original. There are two separate combat damage systems, a simple damage system and a more complex damage system (and henceforth more realistic). I found the skill list to have items that have been, for the most part, overlooked in other games.

One attribute in the game is quite interesting -- Bravado. The example in the game speaks of a punk trying to rob a gymnast. The gymnast does a back flip (landing on his feet) and assumes a pseudo-karate pose. The would-be criminal (being only armed with a knife) is impressed enough to turn tail and flee. The gymnast knows nothing of karate, but is able to act impressive. Bravado, therefore, is a measure of how tough the character appears but not necessary how tough he really is.

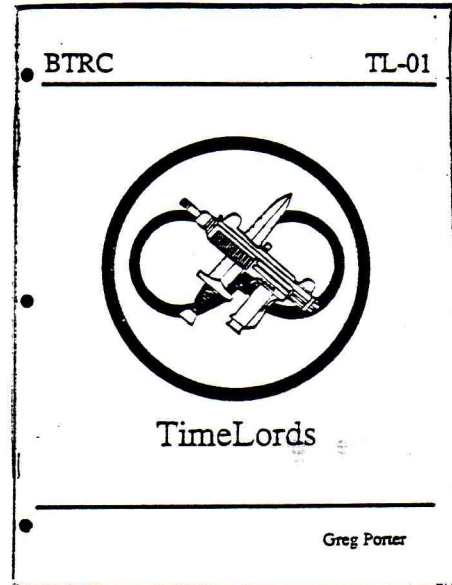
TimeLords is my third favorite role-playing game. I believe everyone knows that Traveller is my favorite (since Traveller is indeed the best RPG around), second favorite being Delta Force (mainly due to the parts of it I've adapted to Traveller), third favorite being TimeLords (due to it being a really good game), fourth being Freedom Fighters (also a good game). I've yet to choose a fifth favorite, and all the others are not ranked.

I highly recommend TimeLords. I have yet to see it (or any other BTRC products) in game stores or mail order establishments, and I am still uncertain if BTRC has direct mail order, but I aim to find out and relay my findings through the pages of Continuum. Meanwhile, if you see TimeLords, buy it.

ESCAPE

Escape (Seeker, P.O. Box 337, Finley, ND 58230: twelve 8.5" by 11" pages with stiff red cover: \$3.00, 1987)

A folio adventure for Traveller. The excellent writing of J. Andrew Keith was unfortunately offset by the overlarge print, the wanting maps, and the slightly high price for what you get. The scenario takes place in the Reaver's Deep, as do all the Keith folios. I can't say anything more than what is implied by the title because there isn't much more to say. There are some Company News Service releases (the company that you work for) and a map of the Ea subsector. Fine writing, so-so production.



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GAZELLE CLASS CLOSE ESCORT

Gazelle Class Close Escort (Seeker, P.O. Box 337, Finley, ND 58230; ten 8.5" by 11" pages with stiff blue cover, three 11" by 17" deck plans, one 8.5" by 11" deck plan, fifty-six one-half inch die cut counters; \$6.00 for 15mm (contents as listed) or \$8.00 for 25mm (probably additional deck plan sheets), 1987)

Deck plan for Traveller. A nice touch was the shrink wrap with enclosed zip-lock bag for permanent storage. The 300-ton, jump-5 space ship previously appeared in JTAS #4 and Supp #7. This version contains a side cross-section which shows that over 50% of the ship is fuel tankage -- something not obvious in the original source. Each room on the deck plan has furniture drawn in, and the drives and bridge areas have more detail than the original sources (or any other Traveller deck plans for that matter). The playing pieces illustrate eighteen Zhodani and twenty-eight other humans, as well as ten space craft. None of the craft seem to be the Gazelle. The dark blue lines on light blue paper might be useful to avoid unauthorized photocopying. The booklet contains overlarge print.

If you would like a set of scaled deck plans for the well-known Gazelle Class, if you just like to study deck plans, or if you are a Traveller material collector, this package is well worth the price. Desirable to some.

BEASTMASTER

BeastMaster, RFYL-1 (Jerry Campbell Pres., Roll-For-Your-Life Publications, 8717 N.E. 138th, Kirkland, WA 98034; 8 single-sided 8.5" by 11" pages with a heavy plastic cover; \$4.50, 1983)

Variant for Traveller. The coverprice is high for what you get. BM (BeastMaster) was being offered for a limited time for \$3 plus 50c postage, but you would have to inquire to see whether or not this still holds. This is the first amateur Traveller publication that I know of that is ACTUALLY COPYRIGHTED!! Even though many other amateur publications claim to be copyrighted, most never are.

As to the contents, as Jerry says "BM isn't for the novice Traveller player." This BM booklet is similar to the Andre Norton book and the movie of the same name. A player role-plays a group of characters, not all human, and some with biological alterations. Keeping personalities straight and not freely letting all your characters share the same information does require some practice, but referees do that sort of thing all the time (keeping track of all sorts of characters, that is). Recommended, but I hope that a retypeset revision with more 'biological alterations' is put out.

THIRD IMPERIUM #6

Third Imperium #6 (Mike Jackson, No. 512, 4676 Yew St., Vancouver, BC V6L 2J6, Canada; eighteen 8.5" by 11" pages (cover on yellow paper) plus eight 5.5" by 8.5" page pull-out booklet; \$2.50 single issue (\$2 in US currency) or \$9.00 for a four-issue subscription (\$7.50 in US currency), 1987)

Quarterly fanzine for Traveller. The special Blotch issue. Information on the Blotch race

(with Blotch homeworld map), hardware for Blotches, deck plan description and stats for a Blotch ship, and an adventure with Blotches. Part 3 (last part) of a series concerning Cyborgs. Featured in this issue's 'Inside Equipment' were three drawings of a Tech Level 13+ stateroom that is almost totally collapsible. And, of course, the ever-present really great illustrations.

The eight-page pull-out booklet was a Traveller Chronology. All the events from the Alien Modules and other books finally put together. Each is listed with the Imperial, Asian, K'Kree, Vilani, Terran, and Zhodani dates. Events start when the Droyne (Ancient) cities first arose and end with the assassination of Emperor Strephon. There is a bar chart representing the spans of time covered by the various major races and a time-line of the Emperors of the Imperium. Overall, the best issue of Third Imperium thus far. Very Useful.

JUMPSPACE #2

Jumpspace #2 (James B. King, 50 Basin Dr., Mesa, WA 99343; sixteen 5.5" by 8.5" pages; \$1.00 single issue or \$4.00 for four-issue subscription, 1987)

Quarterly fanzine for Traveller. 'Every Character is Unique' is the header for a table that can be employed to give characters individuality and uniqueness. The 100-ton 'SHF-53 Shriker Heavy Jump Fighter' by Dustin Hamilton. 'Jump Fuel Allocation' by Michael R. Mikesk. 'Secret Cargo Holds' prices, sizes, and chances of being found.

'Jump Fuel Allocation' discusses what portions of a jump require what amount of fuel; this article takes all official data well into account [unlike my own FTJ (Faster-than-Jump) Commo Stations which ignore official data]. The table for giving character unique features is not original, but useful; the list definitely needs to be longer, but that is admitted in the paragraph preceding the table. The illustrations are excellent, especially those of the space ships. If nothing, buy this issue for the jump fuel article. Quite Helpful.

SECURITY LEAK #2

Security Leak #2 (Gregg Giles, 4200 Park Place 217, Tyler, TX 75703; twenty 8.5" by 11" pages; \$3.25 single issue or \$12 for four-issue subscription, 1987)

Quarterly fanzine for Traveller. Interesting brief history and outline of five corporations (NOT megacorps). Four new items in the way of starship sensors. 'Islands in Jumpspace' by Michael R. Mikesk (very interesting item). A short fiction story by the novelist Jefferson Swycaffer. Finally, a mercenary ticket: 'Unlucky Number'.

It should be pointed out that in the fictional story, the Imperial views may seem a bit strange, but not after you realize that Jeff really wrote the story with the Concordat of Archive as the setting (which is also the background for his current novels) and just refers to it as the "Imperium". The mercenary ticket is actually a scenario, not requiring a military mercenary unit. Larger, more interesting, and improved since the first issue. Interesting.

GENETIC MANIPULATION AND →

FAIRNESS AND GENETIC SOLIDARITISM

Further "meddling" in the natural processes would be more controversial. It is already feasible to influence (but not completely control) the sex of an infant, prior to conception. Lest this raise Orwellian nightmares about the artificial creation of a Master Race, I feel it is important to remind everyone that people have a healthy share of common sense. The problem really is self-correcting. Should a predominance of male babies be born one year, then female babies will be "stylish" the next year. Fads for blue-eyed, blond-haired babies will be counterinfluenced by next year's fad for black-haired, brown-eyed babies. Ultimately, most people will continue to rely on nature's "lottery," so that baby Jimmy can satisfy his parents by having "his Father's chin, and his Mother's nose," something more emotionally satisfying than having the latest model in fashionable babies.

(I will also point out that fads and styles such as tatooing, cosmetic disfigurement, and of course hair, clothing, and makeup styles, will have much more influence on who's hot and who's not than any normal genetic differences.)

That more and more babies will be born healthy and whole, with their vision and their hearing normal and acute, is a benefit that few will choose to set themselves against. The elimination of various inherited diseases is clearly a boon.

THE INTEGRAL DESIGN OF LIVING THINGS

Or would the elimination of inherited diseases really be a boon? Genetic traits do not exist "in a vacuum." When one feature of anything as complex as an animal or human is altered, other features may no longer be in harmony.

The fast breeding of dogs to enhance certain traits is an example here. When dogs were bred for shorter and shorter muzzles, producing the attractive and energetic Pekingese or some of the Toy Terriers, natural selection was bypassed. These new traits do not have any survival value, but were selected for purely on the basis of human preference. The result has been some serious problems with the eye-muscles of these breeds, leading to serious eye injuries.

Overbreeding has produced a serious hereditary hip and pelvic condition in many Collies, often leading to the loss of use of the hind legs. Other dogs have hereditary problems of greater or lesser severity, from the Dachshunds' stomach that drags on the ground during pregnancy, to the extremely small cranial capacity of Dobermans and German Shepards, which sometimes leads to violent behavior.

When discussing the creation of a wholly new species, perhaps using already-existing animal stocks and genes, this problem of balance is ultimately crucial. When dealing with so-called minor variations in the human genetic makeup, it is equally unclear what changes can be tolerated.

A cure for hemophilia, for instance, could well have unwanted side effects, such as a change in how the blood forms coagulents. Clotting, leading to arteriosclerosis, might be a result, striking perhaps only in late age. A cure for diabetes could involve dangerous alterations to the blood-sugar levels of the blood, leading to

emotional instabilities such as depressions or hyperactivity. Medicine is a science, but not an exact science; genetic medicine is a good deal more inexact. At this time, we simply don't know enough to safely practice it.

NEOTENY AND ATAVISM: ADAPTATIONS FOR ADVANTAGE

Among the many fallacies and misconceptions about genetics is the notion that there is a gene that codes "for" every specific bodily function and part. This is not true; there is no gene that gives me the exact shape of my bicuspid teeth, just as there is no gene for intelligence.

Genes can code for broad ranges of characteristics. All of the widely varied breeds of dogs on Earth are still closely related in their genetic makeup. Any single human has within himself more than eighty per cent of the genes for all the human race. Indeed, all vertebrates have a huge genetic heritage in common. The gene that causes giraffes to have brown eyes is virtually the same sequence of DNA that causes some humans to be brown-eyed.

Two traits that are "Polygenetic," or covered by many more than just one gene, are "neoteny" and "atavism." These notions will be useful in the example (below) or a genetically engineered race, and also come in handy here.

"Neoteny" is a tendency in a species to hold on to youthful traits, even in adulthood, in certain advantageous aspects. Human neoteny is seen when we are compared with the young of other primates.

Humans are (comparatively) hairless, have a rotated (or nonopposable) large toe, stand upright, have short, flat faces, and have their large, round skulls, balanced on top of their spines. Further, we are quite weak in comparison to the other primates. Even a small chimpanzee is more than a muscular match for even a strong human; our muscles simply never achieve a full development in power, partially because of weaker attachments via ligaments to our bones.

These same particular traits can be found in the young of the other primates. (See figure one.) The neoteny here is that we retain the youthful traits into our adulthood, specifically for the advantages we gain thereby. The most important advantage, of course, is the increased cranial capacity, and thus our vaunted intelligence.

(Two "accidental" advantages gained are our long lifespans when compared to other species of our size -- deer, dogs, and primates seldom live more than thirty years, but humans have a good chance of living to eighty -- and our undeniable tendency to enjoy childlike play all our lives. Grown cats, dogs, and primates lose their joy of play with maturity, but humans keep a little of the puppy or kitten within them right down to the end.)

Neoteny is an adaptation, giving increased chances of survival to our species. It is, oddly enough, a rather "desperate" adaptation, in that it is a simple one. Every human starts out as a child, and retaining childlike attributes is not a greatly complicated thing to code for. Other adaptations -- converting arms to wings, or altering herbivore teeth into carnivore teeth --

← CREATED RACES, PART II

generally take more time. The implication is that the human race couldn't afford the time. Perhaps the pressure to survive forced this, but it seems a bit like patchwork, like holding a teetering structure together with baling wire and chewing gum.

Much of what makes us human is due to neoteny. There is no doubt that, till now, humans have been the best adapted species the Earth has ever seen. That we can seriously contemplate altering ourselves to increase this adaption is a certain proof of how far we have progressed.

Atavism is almost as interesting as neoteny. It is, however, different in both cause and effect. While neoteny is a trait in all beings of a species to retain features from the young forms, atavism is a tendency in a few individuals to retain features from a distant ancestor.

Dachshund dogs are a neotenus breed, retaining their short noses, long bodies, and large eyes into adulthood, where most dogs lose these puppy-like features with maturity. A very few Dachshunds, however, show atavistic features, such as longer hair, or a smaller skull, that come from their distant ancestors (eventually a wolf-like ancestor common to all dogs).

Atavism, however, works in degrees. An exceptionally hairy human, or a human with an unusually dextrous large toe, could be said to exhibit atavistic traits, but in general the atavistic human is a creature of myth. What is certain is that the tendency is controlled by an entire complex of genes, and never by a single gene "for" atavism.

SCIENCE FICTION AND CREATED RACES

Science Fiction has come, more and more, to deal with the notion of a created race of sentient beings. Two authors who stand out in this regard are Cordwainer Smith and David Brin.

Cordwainer Smith, in his fantastic and surreal stories, postulates the "Instrumentality of Mankind," whose imperial might extends across Earth and to the stars. His book Norstrilia deals with a race of servants and slaves derived from animals. These "Underpeople" are described as beings boosted from dogs, cattle, and, in the case of the remarkable C'Mell, a persian cat. The animal embryos undergo alteration, so that the creature, conceived a normal animal, grows into human shape, able to use human language and tools.

His stories are sensitive and lovely; he deals creatively with the feelings of these people who are not people. His unforgettable story, "The Dead Lady of Clown Town" shows slaves rising against the masters in a brief revolt...only to inform the startled humans that the animals love them. "We love you, we really love you," cries the doomed parade of uprisen slaves, they are executed, but the sight of this nonviolent resistance sparks a recognition among the humans. When they duplicated the human shape, they also re-created the human soul.

Alas for genetic science. Smith never really accepted his modified animals as being a true species. In "The Ballad of Lost C'Mell," he points out that cat-derived Underpeople give multiple birth, just as ordinary cats do, even though the babies are human-shaped, and will achieve human intelligence. Other stories point

out that this atavism will continue to degenerate. Every successive generation of Underpeople will be a bit more debased (unless ministered to by human geneticists), until the original animal form is approached once more. The lesson that Smith expresses is that human interference with the naturally-ordained system of things is a mortal sin, and that nature must eventually reclaim what it has lost.

David Brin, in Sundiver and Startide Rising, deals with the "uplift" of dolphins and chimpanzees to full sentience. Here, the human race laboriously alters these species, over many generations of trial and error, until the end result is a fully sapient and technologically capable pair of companion races, who go with mankind to the stars.

Brin's science is clearly the superior of Smith's. (He has the advantage of thirty years of scientific progress.) While Smith implies that the Underpeople require continued alteration and upkeep, lest they backslide to mere animals, Brin correctly points out that the uplifted dolphins and chimpanzees are fully viable species. After a time, they will have proven themselves as equals, and will be considered as fellows, not as scions. The important point is that the modifications will reproduce accurately; a truly new species has been created.

VENGE: SLAVES OF EMPIRE

With some of this in mind, I'd like to tie it a bit together by stipulating a science-fictional origin for a created species, which I will immodestly name the Verna Swycafferensis.

I begin with an interstellar empire: The Empire of Archive. Their genetic researches have led them to deep understanding of how life operates at the chemical level. Virtually no species on their world has escaped some slight tampering: meat animals produce more and better food; stinging insects are unable to near humans; trees produce straight, hard-curing lumber; seaweeds extract chosen minerals from the seawater.

One of the emperor's sultans is given a new task: to create a slave race, humanoid, but not human, for various labors and tasks, including use in the Empire's arenas as a gladiatorial beast. (As always, blood sports are popular, and entertainment is a segment of the economy with a nearly unlimited budget.)

The project starts with a trial-and-error (or scattershot) melange of many animal genes, grafted together in a more or less hotch-potch fashion. The most promising of these strange hybrids is to be singled out, and put through a multi-generational process of development.

In this, then, the strategy is halfway between the processes described by Cordwainer Smith and David Brin.

The most viable creature created by this random method is a combination of human, feline, and canine plasm. It is not particularly inspiring, resembling nothing more than a very bald gorilla, with odd-shaped ears. It stands partially erect, and is of the right size; the team decides to make use of it. (See figure two.)

The creature (actually a breeding population

GENETIC MANIPULATION, CONT'

of thirty-four) is subjected to a harsh series of mutagens, and widely variable mutations are found. Of these, the ones that display the desired traits, and which also breed true, are kept and bred further.

Genetic manipulation by design begins now; the man in charge, the Gley of Thendall, insists that the creature be given hair, as he is offended by its baldness. Hirsuteness is a moderately atavistic trait, and thus the genes that combine to produce atavism are activated. The result is a creature with luxurious brown fur, massive musculature, opposable great toes, and a forward-sloping forehead, which deprived it of nearly seventy per cent of its cranial capacity. Thendall is not pleased. (See figure three.)

Neoteny, hopefully, will reverse the unpleasant aspects of this setback. Indeed, triggering of the neoteny-causing complex of genes gives the next few generations of creatures very large eyes, a highly-domed skull, and a pleasantly flat face. (All neotenus features.)

Although visitors to the labs are offended by the creature's silly expression (see figure four), and by its small tail (about the size of a deer's or a bear's), Thendall is wise enough to know a success when he is presented with one. The creature is genetically stabilized. Mass production beings, through the use of drugs that induce multiple birth.

The project is sixty years old; within five years, everybody who is anybody will own their own Verna. (The word actually means a slave or servant born in the household of the master.) The warm, furry creatures are not terribly bright, and although they are hard-working and hard-fighting, they are fawningly obedient to their masters.

A final campaign to remedy the many remaining flaws in them is postponed indefinitely, due to the collapse of the Empire of Archive into civil war and anarchy. Nearly seven hundred years later, when the human race re-establishes contact with the Vernae, the species is exactly as it was at the time the Empire fell. The species is true breeding, and has proven itself viable as a spacefaring race.

VERNAE STATISTICS:

Gravitation Norm: 1.02g
Tolerance: 0 - 2g
Max: 7g (for a short period of time)

Atmosphere Tolerance: .4 - 2.5 Atmospheres

Oxygen Norm: .2 Atmosphere partial pressure
Range: .04 - .6 Atmosphere partial pressure

Water Vapor Norm: .003 Atmosphere partial pressure
Range: .0004 - .04 Atmos. part. pressure
Other gasses either inert or in trace quantities

Temperature Normal: -10° - 40°C
Range: -25° - 45°C (short time)

Visual range and acuity: 420 - 670 nm wavelength, with color perception. (The same as for human normal.) The Vernae have several unusual visual abilities (see below). Normal vision for a Verna is 20/10 (they can, on the

average, see at a distance of 20 feet visual details that a normal human can only make out at 10 feet).

Hearing range and acuity: 20 - 20,000 Hz. This is similar to normal human hearing.

Other senses: Stroboscopic vision. (This was never discovered by the scientists who created the species, and is probably a side-effect of the deliberate design that made the eyes so large and acute.) A Verna can use its eyes in a fashion similar to an oscilloscope, to stroboscopically examine the world. It can "freeze" motion, for its own perception, in a manner similar to the familiar "wagon spokes" effect. Range of frequencies is .5 - 120 Hz. At times when this sense is not being consciously used to "focus" on a frequency, it is automatically set at the maximum rate of 120 Hz. This means that a Verna's vision is always minimally strobed.

Visual Point: a Verna can consciously pick a point in its field of vision (only very near the fovea, or center of the field) and use that as an aiming point. (The human equivalent of this ability is imprecise to about 2 degrees of arc. It is very difficult for a human to count bricks in a wall, for instance, without holding up a finger to aim his or her vision, if the wall is at any distance. The bricks may be perceived, but not counted. The Vernae have a finer conscious control over exactly where they are looking.)

Body Shape: Biped; three toe-like pads to each foot; two arms; three fingers and an opposable thumb on each hand; two eyes; two external ears; two nostrils in a small, wet nose; short, non-prehensile tail; twenty teeth (dental formula $2/2 : 1/1 : 0/0 : 2/2$); short, two-coat fur overall (.5 cm matted undercoat, 3-4 cm thick pelt of guard hairs), usually in "Earth tones." i.e., browns, tans, grays, black, white, occasional rusts and reds, nearly always white on chest and belly; classic ectomorph: thin, nervous, quick; fast-twitch musculature; good for short dashes and rapid exertion, but not good for long-distance running or sustained exertion.

Some of these adaptations are actually maladaptations. The dental formula is unfitting to a vegetarian species: alone in the wild, the Vernae would starve to death for their inability to chew their food with only eight molars. (If the knowledge of fire was retained, then perhaps a diet of soup would keep them alive.) Further, most of the advantages of being an intelligent species have been negated by the race's poor dexterity and diminished number of fingers. Tool-making, tool-use, and fine-manipulative skills are the mainstay of an intelligent species' fitness for survival. Without these, the Vernae's intelligence is only a vague asset. Finally, certain vitamin deficiencies and amino-acid-synthesizing flaws in their biochemistry makes survival in the wild a nearly impossible thing for this race to accomplish.

The explanation for all of this is simple: the race never evolved, but was created. The callousness of the scientists and chemists who formed them is expressed in these shortcomings. Just as the Toy Terrier has problems with its eyes, and the Collie with its pelvis and hip-joints, because of forced fast-breeding, so the Vernae suffer from careless design.

GENETIC MANIPULATION, CONT

VERNAE IN A GENERIC ROLE-PLAYING GAME

For role playing gaming purposes, assume that each of the following characteristics is determined for humans by rolling 3D6. For Vernae, most values are rolled on different numbers of dice. Most values are also rolled on Average Dice, which are six sided with faces reading 2,3,3,4,4,5. 2A6 would mean rolling two Average Dice, and summing the values.

| Characteristic: | Vernae: | Human: |
|-------------------|----------|--------|
| Strength: | 4A6 + 4 | 3D6 |
| Intelligence: | 2A6 | 3D6 |
| Ego: | 2D6 - 2 | 3D6 |
| Endurance: | 2D6 | 3D6 |
| Manual Dexterity: | 2A6 | 3D6 |
| Coordination: | 2A6 + 8 | 3D6 |
| Agility: | 2A6 + 10 | 3D6 |
| Charm: | 3A6 + 3 | 3D6 |

Explanation of Characteristics: Strength is sheer muscular power, for lifting or combat. Intelligence is the extraordinary vaguely defined capacity for solving problems, for memory, and for seeing the obvious. Ego is the equally vague force of will, and of assertiveness. Endurance is a measure of how long one can continue physical effort before becoming exhausted. Manual Dexterity is for fine manipulation, such as typing or knitting. Coordination is for gross manipulation, such as swinging a baseball bat, or shooting a basketball. Agility is the overall maneuverability of the body, as in running the hurdles, dodging an onrushing truck, or climbing a ladder. Charm is measure of how people react to the character when meeting him, and how much they will tend to like him, all other things being equal.

Lifespan and Longevity: due to the reduction in the levels of neoteny of their race, a Verna may expect to live to age thirty-one, on the average. A gaming referee could roll 2A6 and add 24, keeping the result of the roll secret from the player. This number is the age at which the Verna will die. Within one year of beginning of the character age rolled, physical signs of deterioration will begin to be noticed; finally, sometime within that year, the Verna will die, quickly, with nearly every bodily system failing at once, over a period of about two weeks.

On the other hand, Vernae mature somewhat more quickly than humans, reaching sexual maturity at age eight, and full physical growth at age nine. Age nine or ten is a good starting age for a Verna character.

Size: Average quite tall, but not very massive.
Height: 60 inches + (1.5 x (3D6)) inches
Weight: ((height (inches) to the 3.5 power) lbs./
21,000.

A five-foot Verna would weigh 80 pounds.
A six-foot Verna would weigh 151 pounds.
A seven-foot Verna would weigh 259 pounds.

Reaction Speed: 1.5 x normal human.
Muscular Output: 3 x normal human.

Fatigue: half human susceptibility to fatigue for short periods of time (one to two hours), then double human susceptibility to fatigue beyond that.

Outlook and Intellect: the Vernae are, simply put, not terrifically intelligent. They are generally cheerful, and seem immune to the usual human gamut of moods and mental illnesses.

V. modestia, the principal subspecies, are gentle and nonviolent; indeed, they cannot be forced to become either violent or aggressive. V. impudicas, the much rarer subspecies, designed for gladiatorial combat, are gentle also, but, like humans, are quite capable of using violence when necessary, perhaps with slightly fewer qualms and less queasiness than a human would feel. (The difference is in the activation of complex recessive genes. The violence-capable subspecies, raised for death in the arena, has probably become extinct by this time, but would possibly be seen now and again due to the workings of atavism.)

Vernae are obedient. This, perhaps, is their greatest noticeable trait. When a human gives an order to a Verna, the order will be obeyed. In general, each Verna will choose a favored human from those about him, and give preference to orders from that human, but human orders are to be obeyed, without question, without delay. Unfair orders, ("Kill yourself, now,") and impossible orders ("Go into space and bring me back a pair of galaxies,") need not be obeyed, but they will place the Verna into a hesitant and indecisive mental state, from which it cannot volitionally escape without great anguish and long thought.

The most common phrase that a Verna will utter is: "I don't understand."
Jefferson P. Surocffer

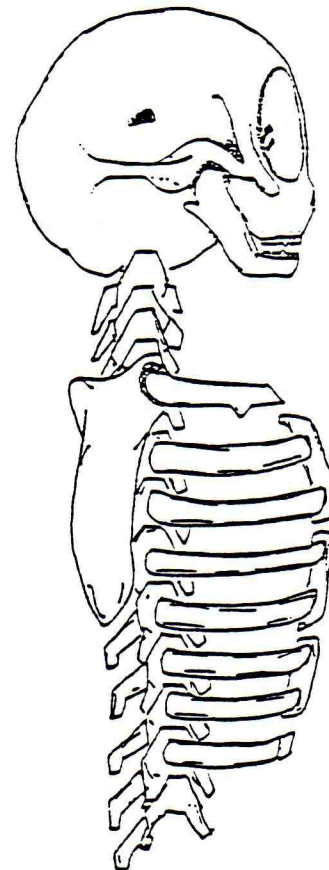
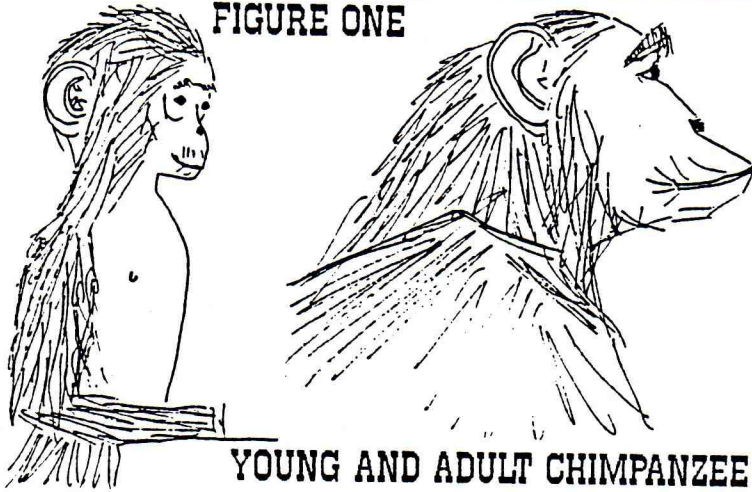


FIGURE ONE



YOUNG AND ADULT CHIMPANZEE

FIGURE THREE

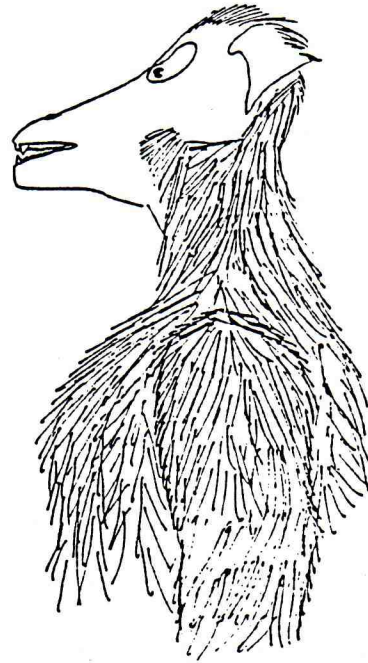


FIGURE TWO

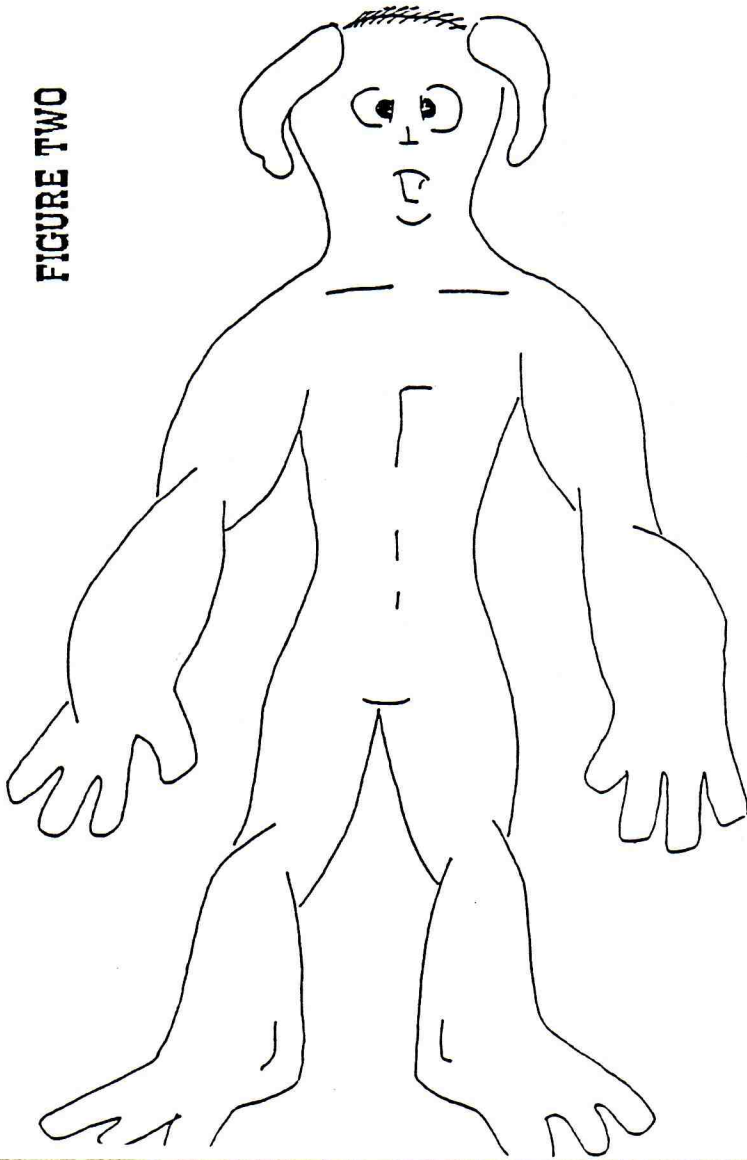
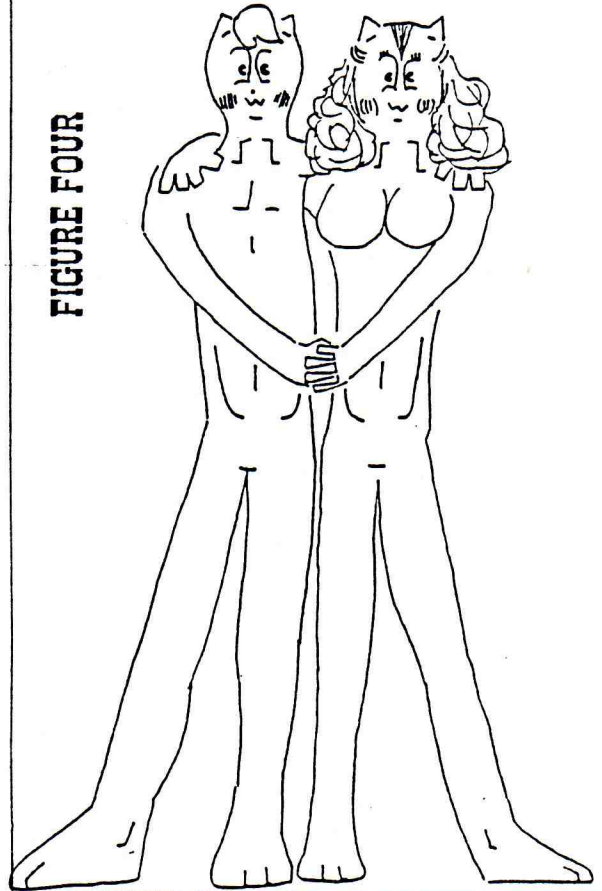
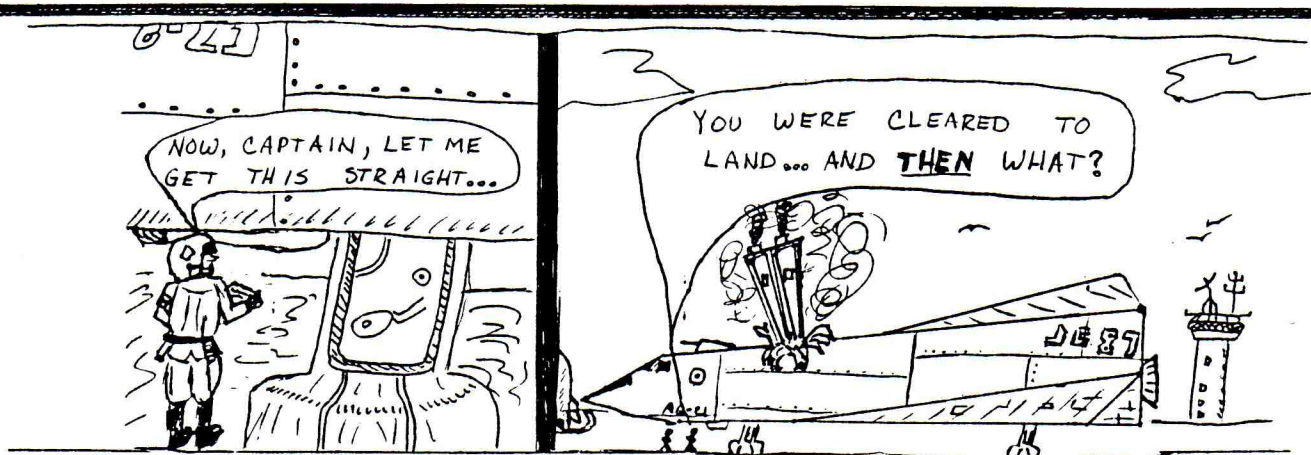
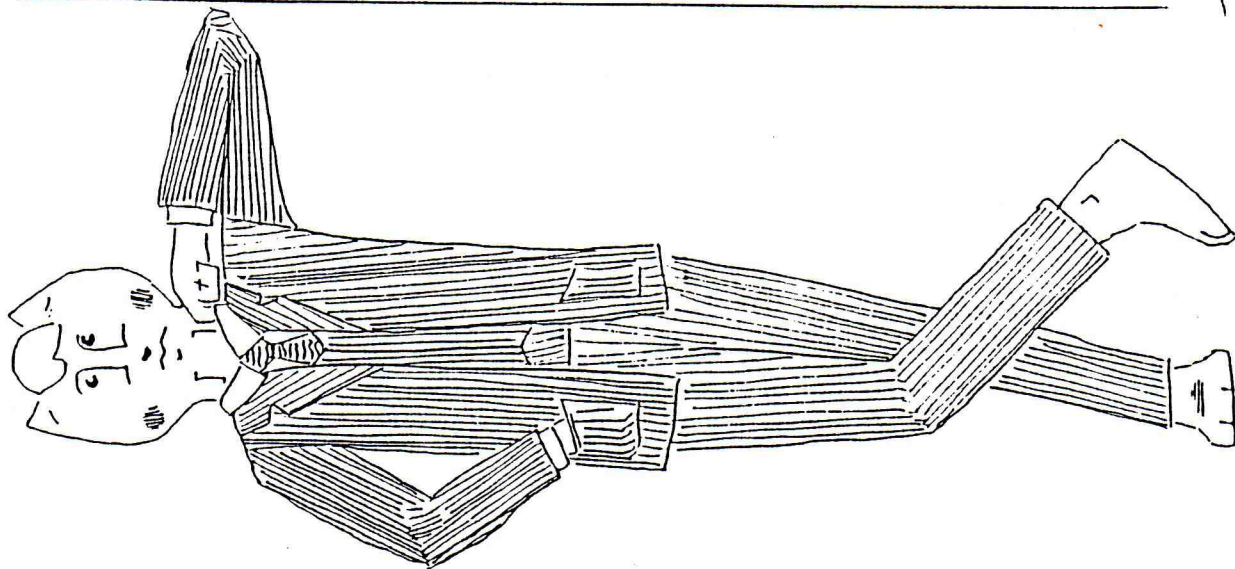
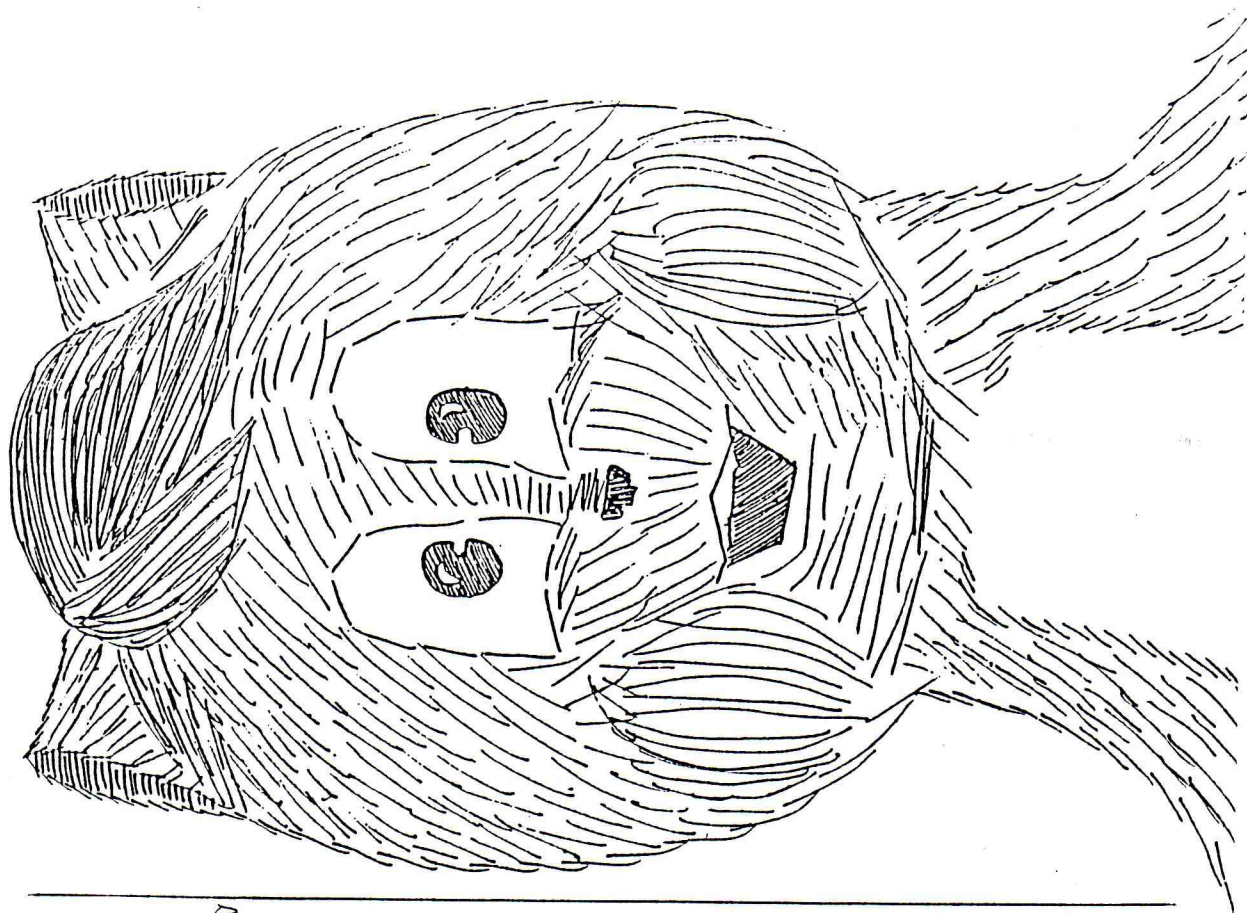
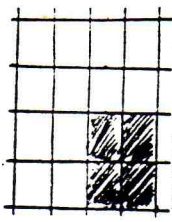


FIGURE FOUR

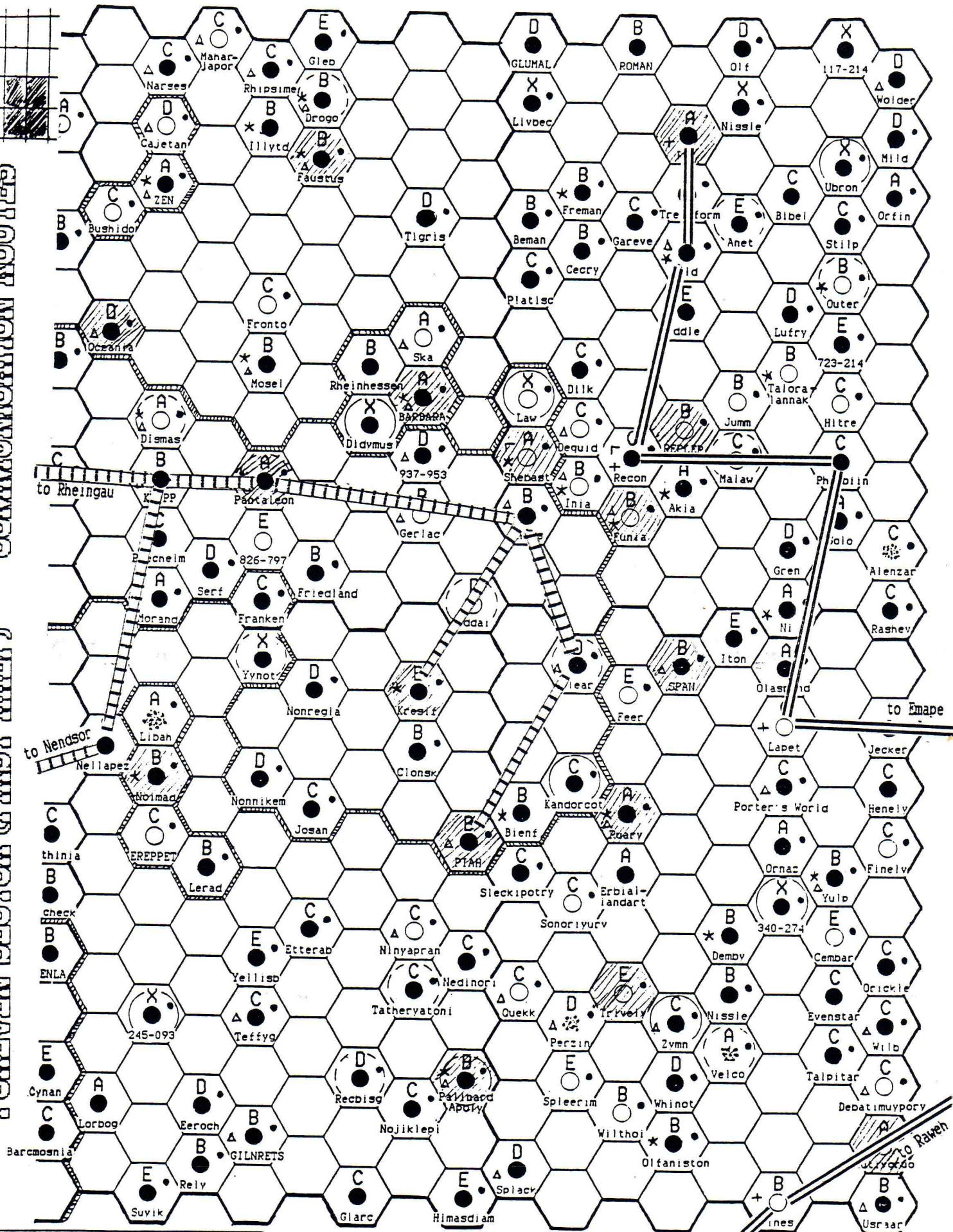






COMMUNICATION ROUTES

FOREVEN SECTOR (FIRST HALF)



> LONE LINES - IMPERIAL
 > SHORT LINES - DIE WELTBUND
 > CROSSHATCHED SYSTEMS -
 (J-Lines) CGU STATION PRESENT