

THE EARLY TERRAN FEDERATION



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1. Creation

In H. Beam Piper's story "The Edge of the Knife", the beginning of the Terran Federation is described by the character Professor Edward Chalmers. But while some information on the Federation's early history is provided, a great deal is left unsaid about the next several centuries. Fortunately, we can partly fill in the gaps with Piper's other, non-Terro-Human Future History, stories, because many common concepts—such as WWII—underlie all his work. In addition, Beam's early Future History seems to have been influenced by the works of several of his fellow science-fiction authors, most notably Robert A. Heinlein. And best of all, in the summer of 2000, I discovered two keys to Piper's underlying scheme of historical models, which has revealed many more details as to how these early Federation events unfold.

"The Edge of the Knife" is set in autumn 1973, and in that story the Terran Federation is said to be a clandestine Cold War creation of the United States. Among the several groups of men investigating the precognitive ability of Professor Chalmers is "Cutler. He's an Army major; Central Intelligence".¹ When Chalmers' foreknowledge of the still-secret Federation—and particularly the top-secret Operation Triple Cross—is revealed at the meeting, Major Cutler is visibly shocked. He asks Chalmers, "You never did any work for PSPB; did you ever talk to anybody who did?" When Chalmers replies negatively, Cutler continues. "Politico-Strategic Planning Board. It's all pretty hush-hush, but this term Terran Federation is a tentative name for a proposed organization to take the place of the U. N. if that organization breaks up. It's nothing particularly important, and it only exists on paper."²

The implication is that the PSPB is a select group of American academics, intelligence analysts and politicians (possibly including some from our key allies) charged with planning for the future. Since Chalmers is a professor of modern history, and back in 1970 was "getting up a series of seminars for some of my postgraduate students on extrapolation of present social and political trends to the middle of the next century",³ Ed himself may have been considered for recruitment to the PSPB.

The previous quote about "a proposed organization" suggests that as soon as the United Nations dissolves, the US will immediately begin bringing nations into the new Federation. And Chalmers already knows that the Terran Federation "won't exist only on paper very long",⁴ because its formation is linked to the reason for which he's being investigated. This is his accurate precognition about the assassination of Khalid ib'n Hussein, "the pro-Western leader of the newly formed Islamic Caliphate".⁵ He received the precognition "a month ago", and knows that "Khalid's death was necessary to the policies of the Eastern Axis, and...would hasten the complete dissolution of the old U. N., already weakened by the crisis over the Eastern demands for the demilitarization and internationalization of the United States Lunar Base".⁶ In turn, the collapse of the UN would "necessitate the formation of the Terran Federation, and...would lead, eventually, to the Thirty Days' War."⁷

The feeling I get from these quotes is that the United Nations ceases to exist by the end of 1973, and then the paper Federation is declassified, and officially organized, early in 1974.⁸

2. Organization

The Thirty Days' War, or Piper's Third World War, occurs less than a year after "The Edge of the Knife", in early autumn 1974. At this time, the roughly six month old Federation is still accepting new members. Because Professor Chalmers knows that Tallal, the son of Khalid, "would return [from England], and eventually take his father's place, in time to bring the [Islamic] Caliphate into the Terran Federation when the general war came."⁹ This implies that Tallal becomes secure as the leader of the Caliphate only after many months (roughly November 1973 to September 1974) of fighting his internal Islamic rivals and enemies. Upon the start of nuclear hostilities, Tallal sides with the Federation.

Joining the Terran Federation rather than the Eastern Axis makes Tallal ib'n Khalid a pro-Western leader like his father. This might be supposed in any case, since Khalid's murder "was inspired, at least indirectly, by the Eastern Axis."¹⁰ Tallal's motives are personal, as well as political.

As a creation of the United States, the Terran Federation is probably an organization that promotes democratic political systems and free-market economies. Thus, America's allies such as West Germany and Japan—on the 'front lines' facing the Soviet Union, leader of the Eastern Axis—almost certainly join the new Federation right away. Other pro-Western nations in the Northern Hemisphere, like South Korea, Taiwan and South Vietnam (threatened by North Korea, Red China and North Vietnam respectively) and Pakistan (bordering "the Indian Communists"¹¹), probably do so as well. But as a Moslem country,

Pakistan may be a member of the Federation through Tallal's Islamic Caliphate.

In Piper's novel *Uller Uprising*, it is said that "the Southern Hemisphere managed to stay out of the Third and Fourth World Wars".¹² So the nations of Latin America, southern Africa and Oceania may not join the Federation until after the war. However, they could join right away. Since WWII lasts only thirty days and takes place in another hemisphere, time and distance would enable the Southern Hemispheric nations of the Federation to avoid getting involved before it's all over.

Incidentally, the Terran Federation's procedure for 'taking the place' of the old United Nations seems to include appropriating its flag. In *Uller Uprising*, this is described as "a neat rectangle of blue bunting emblazoned with the wreathed globe of the Terran Federation".¹³ That certainly sounds like the UN's flag, which is of course a white wreathed globe on a rectangular field of light blue. And since it takes the United Nations' flag, the Federation may also take over the old UN buildings in New York City. As the creator of the new organization, the United States should host the Federation's headquarters, and with the UN dissolved, its buildings are now available. It would make more sense to keep all the employees, diplomats and entourages in the same place than to send them elsewhere. Even if the construction of entirely new facilities is discussed, the UN buildings could at least serve as an interim location. Moreover, with the world situation threatening to spiral into the first all-out Atomic War, there would be little time or inclination to find or build new headquarters for the fledgling Federation.

3. The U.S. Lunar Base

That the United Nations actually falls apart over disputes about the US lunar base implies the base is very important; indeed, of critical importance. This is supported by Piper's non-THFH story "The Mercenaries", in which "every literate person in the world knew that the four great power-blocs were racing desperately to launch the first spaceship to reach the moon and build the Lunar fortress that would insure world supremacy."¹⁴

A lunar fortress and its ability to grant world supremacy is an idea from the late 1940s. In his 'juvenile' novel *Rocket Ship Galileo* (1947), Robert Heinlein has a group of escaped Nazis build a base on the moon, from which they plan to launch nuclear missiles on the defenseless cities of Earth. In this way, they will resurrect the Third Reich from the ashes of defeat, and achieve its goal of world domination.¹⁵ Another place the concept appears is the April 1948 issue of *Mechanix Illustrated*. In an article titled "Invasion Base on the Moon", Willy Ley, a leading science writer of the day, is quoted as saying that "The first nation to establish a lunar military outpost will rule the earth."¹⁶ The article contains several excellent pictures of this facility, which "can dominate not only the world but the entire solar system."¹⁷

A few years later, Heinlein's book was made into the movie *Destination Moon* (1950). Filmed in the early years of the Cold War, the erstwhile Nazi enemy was replaced with the USSR, though characteristic of that time, this is not made explicit when General Thayer states the importance of America building the first lunar base. "The reason is quite simple. We are not the only ones who know that the Moon can be reached. We are not the only ones who are planning to go there. The race is on. And we'd better win it. Because—there is absolutely no way to stop an attack from outer space. The first country that can use the Moon for the launching of missiles—will control the Earth. That, gentlemen, is the most important military fact of this century."¹⁸

Thayer's line of reasoning can explain why Piper's Eastern Axis initiates the Third World War. Because by launching the *Kilroy* in 1971,¹⁹ America wins the race to Luna and begins building the missile base. But the communist bloc cannot allow their main ideological foe, the capitalist United States, to complete the Lunar fortress and achieve world supremacy. To do so would mean giving up their own goal of 'world revolution', which really means Nazi-style world domination. In fact, completing the base should enable America to deliver an ultimatum to the Eastern Axis below: 'surrender, or be destroyed.' Not that the Americans would strike first, but the fear of this possibility, plus the lunar base's supreme importance, explains why the Axis "demands" that it be "internationalized". That is, let's get some communists up there, to either politically neutralize the threat (a Russian veto over its use), or engage in sabotage (keeping the Americans from completing it), or the best option, getting enough of their people on the base to make a play for it themselves. It also explains why these Eastern demands are vehement enough to weaken the United Nations itself—because the completed base will allow the US to dominate the world, essentially transforming the UN into a 'front' for American supremacy.

The movie *Destination Moon* was turned back into a story, of the same name, by Heinlein. In this 'adult' version of *Rocket Ship Galileo*, Robert is more forthcoming about who precisely the enemy is. In addition, while the (renamed) characters are en route to the Moon he has them speak a few lines that seem applicable to Piper. First, Admiral Bowles (General Thayer's replacement) describes the disputes at the UN between the East and West over control of Luna. "Our trip has caused grave international repercussions. The Security Council has been in constant session, with the U.S.S.R. demanding that the Moon be declared joint property of the United Nations."²⁰

As in Piper, that would 'internationalize' the lunar base, but Bowles states the Soviet Union's real reason for the demand. "Doctor, this is not an attempt to insure the neutrality of the Moon; this is the same double-talk they used to stop world control of atomics. The commissars simply want to tie us up in legalisms until *they* have time to get to the Moon. We'll wake up one morning to find Russia with a base on the Moon and us with none—and World War Three will be over before it starts."²¹ And, "There is bound to be a rocket base on the Moon. Sure, it ought to be a United Nations base, keeping the peace of the world. But the United Nations has been helpless from scratch. The first base is going to belong to us—or to Russia. Which one do you trust not to misuse the power? Us—or the Politburo?"²²

The difference is that in Heinlein, the Communist Bloc raises a howl at the UN before the Americans even land on the Moon, while in Piper, they do so while the Americans are working to finish the lunar fortress.

4. "Operation Triple Cross...Saved the Country"

The Eastern Axis decides to act before that can happen. First by pulling out of the UN, which heralds its collapse, and second by attempting a military solution.

Chalmers foreknows that in their opening salvo of the strategic nuclear exchange, "the enemy missiles would be aimed primarily at the rocketports from which [the US Lunar Base] was supplied. Delivered without warning, it should have succeeded—except that every rocketport had its secret duplicate and triplicate. That was Operation Triple Cross; no wonder Major Cutler had been so startled at the words, last evening."²³ The Axis sneak attack is therefore the 'nuclear Pearl Harbor' long feared by American Cold War military planners.

This quote also reveals the enemy's true objective. The missiles are not aimed at the moon base, but at its source of supply. In other words, a 'divide and conquer' strategy. By cutting the US off from its lunar fortress, the Eastern Axis can then take it themselves, thus transferring world supremacy from the West to the East. At a stroke, the 'Blue' Moon would become Red, and the communist bloc could then dictate terms to the rest of the world; similar to the Nazi plan in *Rocket Ship Galileo*.

However, the Eastern Axis launches its offensive too late, because "By that time, the Lunar Base would be completed and ready."²⁴ They are therefore unaware that it is fully operational, and the reader will recall that "There is absolutely no way to stop an attack from outer space." The American nuclear response to the East's dastardly missile blitz is to launch obliteration from their invasion base on the Moon. "The enemy would be utterly overwhelmed under the rain of missiles from across space, but until the moon-rockets began to fall, the United States would suffer grievously."²⁵

The implication is that the United States survives WWII, since it is wounded "grievously" but not mortally. American survival is also suggested by Chalmers' foreknowledge that "Operation Triple Cross...saved the country during some fantastic war."²⁶ The nation is saved, but its foe is "utterly overwhelmed", which suggests that it is mortally wounded; it is destroyed. Thus, America not only survives WWII, it emerges victorious. And since it still controls the lunar fortress, the United States actually achieves world supremacy. It becomes the sole superpower, and dominates the world from the 'high ground' of Luna. Furthermore, as the Americans can be trusted "not to misuse the power", theirs is a benevolent supremacy, promoting democracy and free trade across the entire globe.

5. The End of the Soviet Union

But Piper is a little vague here. By "enemy", does he mean that the entire Eastern Axis—USSR, Red China, and Communist India—is utterly overwhelmed by lunar nuclear missiles? Not if his story "Day of the Moron" applies. There, when Piper says "enemy", he means the Soviet Union, America's main enemy in the Cold War. "There were still, in 1968, a few people who were afraid of the nuclear power planet.

Oldsters, in whom the term “atomic energy” produced semantic reactions associated with Hiroshima. Those who saw, in the towering steam-column above it, a tempting target for *enemy—which still meant Soviet*—bombers and guided missiles.”²⁷ Long-range Soviet bombers and guided missiles clearly point to the USSR. Neither Red China nor India had them in 1968, nor in 1974, when Piper’s Thirty Days’ War occurs. Even today, four decades later, only China is getting close with its Xian H-6K bomber (which reportedly can target Hawaii with cruise missiles) and D-41 ICBM (comparable to the US Minuteman).

The end of the Soviet Union is supported by “Hunter Patrol”. In that (also non-THFH) WWII story, “We damn near lost the war...but for once, we won the peace. The Soviet bloc was broken up—all the Satellite States. Most of them turned into little dictatorships, like the Latin American countries after the liberation from Spain, but they were personal, non-ideological, generally benevolent, dictatorships, the kind that can grow into democracies, if they’re given time.”²⁸ Since the Satellite States include “the Ukraine or Latvia”,²⁹ Piper was quite prescient, for that is pretty much what happened when the Warsaw Pact and the Soviet Union dissolved—peacefully, thank God—in the late 1980s and early 1990s.

Indeed, even the possibility of a peaceful dissolution is foreseen by Beam. In another non-THFH story, “Operation R.S.V.P.”, the development by Afghanistan [read America] of an impenetrable missile shield [read SDI] and superior nuclear and biological weapons allows it to “*decree and command that the political entities known as the Union of East European Soviet Republics and the United People’s Republics of East Asia [USSR and Red China] respectively, are herewith abolished and dissolved into their constituent autonomous republics, each one of which shall herewith enjoy complete sovereignty within its own borders as is right and proper.*”³⁰

In Piper’s main Terro-Human Future History, the Thirty Days’ War involves a much more violent end for the USSR. But after the United States obliterates the Soviet Union with a rain of missiles from Luna, one can easily deduce that it ‘reloads’ the base with missiles from the secret duplicate rocketports. This enables the Americans to next “decree and command” Red China to surrender, or face the same fate as Big Brother Russia. If China refuses, it will be obliterated in turn, and the lunar fortress can again be reloaded, this time from the secret triplicate rocketports. It will then be the Indian Communists’ turn to face the choice of suicide or surrender. But the United States is probably spared the necessity of a second salvo from space, let alone a third. The overwhelming destruction visited upon the USSR reveals that the lunar base is indeed operational, and has the ability to wipe out entire nations. The Americans hold all the aces, for neither China nor India have anywhere near the nuclear capability—and no space capability at all—to take them on. The surviving members of the Eastern Axis are therefore forced to yield; yet this enables them to live and fight another day.

6. “Some Kind of a World Empire”

After the Third World War, the Terran Federation becomes “some kind of a world empire”.³¹ This is presumably a new and improved version of the United Nations, in which world peace and collective security are not stymied by the interference of militaristic totalitarian states. The United States of America, the sole superpower, and possessor of “the Lunar fortress that would insure world supremacy”, is the backbone of the organization. Another improvement is that, unlike the United Nations, which in Beam’s time only included most of the world, the Terran Federation encompasses the entire globe. In Beam’s story “Omnilingual”, set two decades after WWII, the progress of the Cyrano Expedition to Mars is broadcast back to Terra by “Sid Chamberlain, the Trans-Space News Service man,” and Gloria Standish, “the Pan-Federation Telecast System commentator with the expedition.”³² Not by national news organizations like the BBC, NBC, or CBC. Moreover, the international crew of the *Cyrano* mention bringing their discoveries on the Red Planet “to the public and to the universities and the learned societies, and to the Federation Government.”³³ Bringing them to the attention of *national* governments is not even on the list.

Yet we know that nation-states still exist, and in fact make up the Federation, much like the United Nations before it. In “The Future History”, Piper says that after the Cyrano Expedition, there are “Further explorations of Mars, Venus, Asteroid Belt and Moons of Jupiter. [The] First Federation begins to crack under strains of colonial claims and counter-claims of member states.”³⁴ The difference seems to be that the Security Council of the old UN, which was subordinate to the whims of its members’ national governments, is replaced by a global government in which nations are subordinate. This is the case in

“Hunter Patrol”, in which after WWII “the United Nations rules the world”, and nation-states have been demoted to mere states of the global union;³⁵ and in *Crisis in 2140*, where “the Reunited Nations” is seemingly of global extent, but nation-states such as Nepal and Israel still exist, the latter even continuing its long history of border clashes with the Arabs.³⁶ Even in “Operation R.S.V.P.”, the dissolution of the UEESR and UPREA is followed by the creation of “a supranational organization” led by the Ameer of Afghanistan, who becomes its first President.³⁷ This is presumably of Eurasian extent, but if we again read ‘America’ instead of ‘Afghanistan’, it becomes a global state involving American hegemony over its (peacefully) defeated communist foes.

But in the Terro-Human Future History, one nation apparently resists joining the Federation. In Beam’s story “The Keeper”, set in the far distant future, it is mentioned that “Britain was a great nation, once; the last nation to join the Terran Federation, in the Third Century Pre-Interstellar.”³⁸ Since the Federation is a global organization in the 1996 of “Omnilingual”, the accession of Britain probably occurs not long after WWII, when the new world order is established. Those nations which did not join before the war enter the Federation after; defeated foes like China and India probably with the lunar gun to their heads. The nations of the Southern Hemisphere join the Federation either just before or just after WWII.

This leaves Great Britain. ‘Some kind of a world empire’ itself in the Nineteenth Century, and a fading power before 1974, Britain is almost certainly a staunch US ally in the Thirty Days’ War. Afterward, it may vainly try to preserve its international influence, mainly through the British Commonwealth. But even the Commonwealth is fading, if not collapsing. First, as a member of the Eastern Axis, Communist India undoubtedly withdraws from the capitalist—and to Marxists, neo-imperialist—Commonwealth before WWII. Second, Ed Chalmers foreknows that “the secession of Canada from the British Commonwealth” will occur during the war.³⁹ And third, we’ve already seen that major Commonwealth countries like South Africa, Australia, and New Zealand do not come to Britain’s aid as they did in the previous world wars (“the Southern Hemisphere managed to stay out of the Third and Fourth World Wars”). Save for Nigeria, this literally leaves post-WWII Britain with no Commonwealth support of any consequence.

Moreover, Chalmers says that “when Mars and Venus are colonized, there will be the same historic situations, at least in general shape, as arose when the European powers were colonizing the New World”.⁴⁰ Since the rest of the world has joined the Terran Federation, which practically controls access to space—all those ‘New Worlds’ containing almost limitless opportunities—the global organization is probably “too good a thing to stay out of.”⁴¹ At some point, probably within a decade after the Thirty Days’ War, the British finally give up their vestigial dreams of ‘Splendid Isolation’—which has now turned into plain isolation—and join the Federation.

Or do they give them up? For by joining they may actually hope to renew their influence and power; some of the “colonial claims” on Venus and Mars and the moons of Jupiter are probably British. And this would be a Piperian example of history repeating itself, for just as isolated Britain joins the Terran Federation last and begins colonizing new worlds, so the island was a latecomer in colonizing the New World, which actually heralded the beginning of its rise to world empire. (And as we will see, the “New World” quote ties in Beam’s hidden scheme of historical models.)

Many cities are undoubtedly atom-bombed in the Thirty Days’ War. Assuming Great Britain fights alongside the US in Europe, that would include important centers such as London and Manchester, thereby providing another reason for the British to join the Federation—they cannot handle rebuilding the country all by themselves. In America, Professor Chalmers foreknows that Northern State Mental Hospital was “in the one part of [California] completely untouched by the H-bombs of the Thirty Days’ War.”⁴² This strongly implies that Los Angeles and San Francisco are hit; by extension, New York City and Washington, DC on the East Coast are probably nuked, as well. They are in “The Answer”; Professor Richardson mentions the destruction of “New York and Washington and Detroit and Mobile and San Francisco”.⁴³ New York City is also bombed in “Hunter Patrol”, where Fred Benson returns from the Turkish Theater of WWII to “the shattered skyline of New York.”⁴⁴

Assuming that the Terran Federation’s original offices are the old UN buildings in New York, they are therefore probably destroyed in the Thirty Days’ War. This would necessitate building new headquarters. And in “Hunter Patrol”, the UN relocates to St. Louis after WWII. “See, New York was bombed flat. Where the old UN buildings were, it’s still hot.”⁴⁵ Because of this, “The UN chose St. Louis for its new

headquarters—many of its offices had been moved there after the bombing of New York—and [then] the city by the Mississippi began growing into a real World Capital”.⁴⁶ Piper even gives a very good military reason for the move there. “It was centrally located, and, being behind more concentric circles of radar and counter-rocket defenses, it was in better shape than any city in the country and most likely to stay that way.”⁴⁷

This reasoning would hold true for the Terran Federation after the Thirty Days’ War. As the Federation is created and dominated by the United States, it would certainly make sense for its capital to be located in the heartland of North America. And since the Terran Federation is “some kind of a world empire”, locating its new headquarters there would indeed make St. Louis the world’s capital.

7. A Promising New Era

In his Introduction to the 1981 collection *Federation*, John Carr asked, “So how did Terran civilization rebuild itself after the Third World War? Certainly by 54 A.E. civilization had reasserted itself sufficiently enough to mount a major archaeological expedition to Mars, as described in “Omnilingual”.”⁴⁸ Although grievously wounded by Soviet bombers and guided missiles, the United States apparently recovers pretty quickly, as its personnel seem predominant aboard the *Cyrano*, in the Federation’s first expedition to Mars. At least, I have always viewed Martha Dane, Tony Lattimer, Sid Chamberlain, Gloria Standish and Captain Field to be Americans.

The major Northern Hemispheric allies of the US are also represented in the expedition, meaning these nations have a similarly swift recovery from WWII—or perhaps suffered a lesser degree of nuclear destruction, as the Soviet Union’s main strike was against America. These include Colonel Hubert Penrose (possibly British), Sachiko Koremitsu (Japanese), Selim von Ohlmhorst (Turco-German) and Captain Laurent Gicquel (French Canadian). A fairly quick American rebound from the Thirty Days’ War is supported by “Hunter Patrol”, which says that after the end of WWII, “There was a momentary faltering of the economy, and then the work of reconstruction was crying hungrily for all the labor and capital that had been idled by the end of destruction. There was a new flood-tide of prosperity”.⁴⁹

The period after the Thirty Days’ War could therefore be called the *Pax Americana*. Although nation-states still exist, Terra in the American-led Federation is united, peaceful and largely democratic. In this atmosphere of new prosperity and new beginnings, an at least superficially united Terro-Humanity embarks on the colonization of the Solar System. Piper says that this starts with the *Cyrano* Expedition to Mars in 1996, and is followed by the “Further explorations of Mars, Venus, Asteroid Belt, and Moons of Jupiter.”

This era can also be referred to as the First Terran Federation in its ‘Northern’ phase, as the nations of the Northern Hemisphere—minus an obliterated Russia—are still dominant.

Parenthetically, the early Federation period actually seems to parallel a similar era in the 1948 novel *Triplanetary*, the first of the classic Lensman series, by E. E. “Doc” Smith. There, after an American victory in WWII, which occurs sometime in the later Twentieth Century, “From our protected areas in North America a strong but democratic government can spread to cover the world. That government can be extended easily enough to include Mars and Venus.” And, “The aftermath. Reconstruction. Advancement. One world—two worlds—three worlds—united, harmonious, friendly.”⁵⁰ Although in Piper’s universe, the ‘united and harmonious’ part doesn’t occur until two major wars later, after the Secession of Venus is defeated.

The *Pax Americana* lasts for quite a while; 74 years, the last quarter of the Twentieth Century and first half of the Twenty-First. But the new prosperity and colonization of new worlds fostered under the aegis of the early First Federation do not end Terro-Human competition and conflict. For as we’ve seen, Beam states that, eventually, the “First Federation begins to crack under strains of colonial claims and counter-claims of member states”.

8. The Fourth World War

American supremacy therefore doesn’t last forever. This brings us to “the Fourth World—or First Interplanetary—War.”⁵¹ In *Uller Uprising*, there is mention of “the old U.S. [nuclear weapons] data that General Lanningham brought to South America after the debacle in the United States in A. E. 114.”⁵²

Lanningham's departure from the Northern Hemisphere is clearly connected to "the end of civilization in the Northern Hemisphere and the rise of the new civilization in South America and South Africa and Australia".⁵³

The destruction of an entire hemisphere would certainly take a world war to accomplish, which should make this major event Piper's Fourth World War. And in "The Future History", Piper confirms it. "World War IV. (First Interplanetary War.) A.E. 106-109; minor wars for ten years thereafter. Complete devastation of Northern Hemisphere of Terra."⁵⁴ A devastating Northern Hemispheric war, and the emigration of an important American to South America, are elements also found in Beam's story "The Answer". There, after an accidentally-started world war causes "the obliteration of civilization in the Northern Hemisphere", American and Russian nuclear scientists emigrate to the Southern Hemisphere; specifically Argentina.⁵⁵ In that non-THFH tale, however, the war in question is not WWIV, but WWIII, and this WWIII occurs in 1969, not 1974. The aftermath is a little different, too. "And the end result—the United States and the Soviet Union blasted to rubble, a whole hemisphere pushed back into the Dark Ages, a quarter of a billion dead."⁵⁶

"Dark Ages" implies that civilization in the Northern Hemisphere has not in fact been obliterated; it still exists, having been set back many centuries—possibly to the early Medieval period. In the THFH, however, "the end of civilization" suggests something much worse; the famous phrase 'bombed back to the Stone Age', or Northern mankind starting over from scratch. But they may not quite go back to "stone knives and bearskins", to use Mister Spock's phrase.⁵⁷ Over a hundred years after WWIV, Reginald Fitzurse is "a retired Federation army officer" on board the *Stellex* which discovers the planet Freya. The Freyans he encounters are at a High Medieval level of society, with plumed cavalry and early firearms. Fitzurse declares them "better than anything I ever saw", and "All the mounted warriors he had ever seen had been Eurasian barbarians of North Terra, the human debris of the Atomic Wars, against whom he had campaigned to protect the reclamation projects."⁵⁸ The post-WWIV North Terran barbarians have therefore at least recovered the use of the horse.

As for the "minor wars" following the end of the Fourth World War, "ten years thereafter" from AE 109 would be AE 119. Thus, America, the dominant nation of the Terran Federation, actually survives WWIV, but five years later, in AE 114, suffers a "debacle", defined as a catastrophic defeat, or rout. This may be the *coup de grace*, as the US must have suffered more greatly in WWIV than it did in WWIII.

The reason being that in the decades since the Thirty Days' War, advances in nuclear weaponry make WWIV much worse than its predecessors. The two A-bombs of WWII and the many H-bombs of WWIII were bad enough, but as Carlos von Schlichten says in *Uller Uprising*, the development of "the Bethe-cycle bomb, and the sub-neutron bomb, and the omega-ray bomb, and the nega-matter bomb", "almost made a lifeless desert, like the poles of Uller, out of our world".⁵⁹ "Our whole Northern Hemisphere, where our greatest nations were, was devastated; much of it is wasteland to this day."⁶⁰ From Carlos' perspective, WWIV happened over four centuries ago,⁶¹ so at least some of the Northern wastelands are still radioactive, or at least have not yet been added to "the reclamation projects" mentioned by Fitzurse.

The Third World War is therefore completely overshadowed by the Fourth. Seriously wounded in WWIII (and pushed back into the Dark Ages in "The Answer"), the United States is nearly destroyed during WWIV, and then finished off five years later. From the devastated ruins of nuclear-wasted America, General Lanningham leaves for South America. But the enemy fares no better, since the end result of WWIV is not just a hemispheric Dark Age, but the end of civilization in the Northern Hemisphere entirely.

If the United States is still the leading nation of the Terran Federation, and the Federation is of global extent, then who is the enemy in WWIV? Since nation-states still exist, it must be a Terran nation or nations; Piper's statement that the Federation "begins to crack" sounds similar to the strains on the United Nations before its dissolution, not to mention the League of Nations before that. And multiple nations would parallel the enemy alliances in previous world wars; the Central Powers, Axis, and Eastern Axis.

But although the Future History is lacking in details, Piper's non-THFH tales again provide some clues. In *Crisis in 2140*, "the disastrous wars of the Twentieth and Twenty-First Centuries" are mentioned, right before "*Mein Kampf* and *Das Kapital*, with the A-bomb and the H-bomb, with concentration camps and blasted cities."⁶² The "disastrous wars" undoubtedly include WWII and WWIII (20th Century), as well as

WWIV (21st Century). *Mein Kampf* of course refers to the Second World War, but in that war, fascism, or national socialism, was largely destroyed. So the enemy in the Fourth World War is more likely an *international* socialist, or communist, one. *Das Kapital* refers to the known communist enemy of WWIII—the Eastern Axis of USSR, Red China and India—which may therefore be defeated but not totally destroyed. And we’ve already shown that while the Soviet Union is obliterated, Red China and Communist India probably survive, after being forced to surrender.

This interpretation appears to be confirmed on the very next page of *Crisis*. “Nobody...is stupid enough, today, to want to be a dictator. That ended by the middle of the Twenty-First Century. Everybody knows what happened to Mussolini, and Hitler, and Stalin, and all their imitators.”⁶³ In the Terro-Human Future History, WWIV occurs right in the middle of the Twenty-First Century, so these quotes from a non-THFH novel are clearly applicable. Combining the socialist tracts in the first quote with “dictator” in the second, the cause of the disastrous Fourth World War would then be ‘socialist dictators’. Since fascism largely died in WWII, it would therefore seem that Beam is referring less to Mussolini’s or Hitler’s imitators—of which there have been few—than to Stalin’s, of which there have been many. Beginning with Mao Tse-Tung, and followed by Kim Il-Sung, Ho Chi-Minh, Fidel Castro and a number of others. To these, we can add an ‘Indian Stalin’, who subverts his country to communism, takes it out of the British Commonwealth and into the Eastern Axis, sometime before WWIII.

Furthermore, there’s another quote from “The Answer” which seems to apply to Piper’s Fourth World War. In that story, “the Auburn Bomb”—a suspected Soviet first strike—is what starts the war which devastates the Northern Hemisphere.⁶⁴ But the Russian nuclear scientist, Alexis Pitov, vehemently denies that it was the Soviet Union’s doing, and suggests other countries that could have launched it. “There was China, and India. If your country and mine wiped each other out, they could go back to the old ways and the old traditions. Or Japan, or the Moslem States. In the end, they all went down along with us, but what criminal ever expects to fail?”⁶⁵

What Piper seems to be saying through this character is that the USSR didn’t start the war which devastates the Northern Hemisphere—the Fourth World War in his main Future History—making the most likely suspects “China, and India.” Although he has Pitov mention Japan and the Moslem States (Islamic Caliphate) as alternate possibilities, these can be discounted, as we’ve seen that both are pro-Western members of the Terran Federation. Now, among the two most likely suspects, “the old ways and the old traditions” of China are imperial, and supremacist. Unlike India, China considers itself ‘the Middle Kingdom’, the center of the world, to whom all other nations must bow; and its leaders have traditionally been called ‘Sons of Heaven’.

Nor is that all. For if we use the past to predict the future, then since the main enemy in WWI and WWII was Germany, and the main enemy in WWIII was the Soviet Union, by extension the main enemy in WWIV should be—*another Soviet Union*. The original USSR was “utterly overwhelmed” in the Third World War, so the Fourth World War would then be preceded by the creation of ‘another Soviet Union’ by the surviving members of the old Eastern Axis, Red China and Communist India. The former USSR consisted of fifteen autonomous republics, meaning that China and India are quite possibly joined by their own sets of Satellite States; smaller nations which have come under their control or influence since the Third World War. At the very least, these should include North Korea, Mongolia, Nepal and Bhutan. Other candidates are Burma and Ceylon (coveted by India as part of the old empire of the Raj), North Vietnam and Laos (along China’s southern border). Russia was obviously the dominant member of the USSR, with Ukraine in the secondary position; one would then presume that Red China is the dominant member of the new Union, with Communist India in the secondary role.

Prior to political unification, it is likely that this group of nations begins their association with a series of economic and, later or secretly, military treaties. Thus, the Union might begin as a ‘Sino-Hindic Axis’. Unlike the old United Nations, however, the Terran Federation is a global state—national governments are subordinate to the Federation Government—so it would probably be much more difficult for the nations of the new Axis to simply withdraw from the organization, as the Eastern Axis did from the UN before WWIII. The goal of the deduced Sino-Hindic Axis may therefore be more subtle; to destroy American hegemony from within, to take over the Federation themselves. Indeed, unifying their countries into a ‘Sino-Hindic (Soviet) Union’ could be part of that plan. China and India are the two most populous

nations on earth, and Asia the largest continent. Upon its inception, the postulated Sino-Hindic Union would immediately become the most important, if not powerful, polity in the whole Terran Federation. An 'Asian Colossus', with three times the population of America and its main allies combined. The center of political gravity would therefore begin shifting from North America to Asia, and it would seem almost inevitable for the political capital to follow at some point—from St. Louis to Peking.

Were the Chinese Chairman to succeed in becoming the new master of what Piper called "some kind of a world empire", he would indeed be elevated into a new Son of Heaven; a 'World Emperor'. Similar to the situation in "Hunter Patrol", where "the United Nations rules the world... but the UN is ruled absolutely by one man"—The Guide.⁶⁶

The deduced subterfuge probably fails, as the democratic nations of peripheral East Asia, North America and Europe would not sit idly by and let the Chinese and Indians unite and snatch the Federation away from them. The Sino-Hindic Axis may then begin the process of officially withdrawing from the Federation, but more likely launches its contragravity air-navies (developed before WWIV) to accomplish its goals by force. The world war that results would then be the final totalitarian attempt to gain world supremacy over the democracies, even as the communist USSR and the German Fascist and Imperial regimes did in previous world wars.

Although the main theater of WWIV is undoubtedly Terra, as the First Interplanetary War, there must also be lesser actions between rival Sino-Hindic and 'Northern' Federation (Japanese-American-European) colonies on Luna, Mars, Venus, the Asteroid Belt and the moons of Jupiter. Compared to the Bethe-cycle, sub-neutron and Omega-ray warfare occurring all over North Terra, these battles are probably of no great importance, and since their parent nations are destroyed in WWIV, all the extraterrestrial colonies undoubtedly come under the authority of the new 'Southern' Federation.

9. "The Rise of the New Civilization"

After the Fourth World War destroys the Northern Hemisphere, what's left of the First Terran Federation consists of the nations of the Southern Hemisphere. Foreseen by Professor Chalmers as a "Completely unified world; abolition of all national states under a single world sovereignty",⁶⁷ it is the First Federation, in its second or 'Southern' phase, that abolishes nation-states, and brings nuclear weapons under centralized control. "[W]e made one nation out of all our people, and vowed never to commit such [Atomic War] crimes again."⁶⁸

The reason for doing so is quite simple. Calculations reveal that WWIV devastates about 70% of Terra's land surface. Although the Southern Hemisphere's roughly 30% is untouched, much of this land is infertile, comprising Antarctica (ice-covered) and the deserts of Australia (the Outback) and southern Africa (Kalahari). The amount of arable Terran land has therefore been reduced to more like 14%. In Piper's works, atomic wars are caused by "Too many thermonuclear weapons and too many competing national sovereignties."⁶⁹ If nation-states continue to exist, the next war the survivors can expect is a 'Fifth World War', fought in the Southern Hemisphere this time, which will probably destroy the rest of Terra. Thus, the unprecedented devastation of WWIV finally brings home to Terro-Humanity that "You either went on to the inevitable catastrophe, or you realized, in time, that nuclear armament and nationalism cannot exist together on the same planet".⁷⁰ Nationalism must be eliminated, to save what remains of Terra and Terran civilization.

They realize it in time, and "put an end to that folly".⁷¹ Thus, a Fifth World—or Final Atomic—War is avoided.

Politically, the Southern Hemisphere is mainly comprised of the Germanic-speaking nations of the former British Commonwealth (South Africa-Australia-New Zealand), and the Romance-speaking nations of South America (Brazil, Argentina, Colombia, etc.). This duality reveals the probable nucleus of the two power-blocs that would have arisen and caused WWV, if nation-states had not been eliminated.⁷² But luckily, all the Southern Hemispheric nations have democratic traditions, though South America's have admittedly been somewhat sporadic. With the destruction of the totalitarian Sino-Hindic enemy in WWIV, however, there are no longer any member states in the Federation which will try to subvert it to their own ends, or reflexively oppose every action for the common good.

The historical trend since the early Twentieth Century has been toward global unity and democracy (the League of Nations, United Nations, and Terran Federation of nations); plus there may be a general

consensus among the democratic peoples of the Southern Hemisphere of the necessity for the “abolition of all national states” and a “Completely unified world.” In turn, making one nation of all Terra is probably what causes “the rise of the new civilization in South America and South Africa and Australia.”⁷³

Incidentally, Piper’s use of the word “abolition” implies that nation-states are *legally* abolished. So at some point after WWIV, the Federation Parliament⁷⁴ presumably enacts an historic piece of Terran legislation. Professor Chalmers foresees “a single world sovereignty”, and in “Hunter Patrol” there is a “World Sovereignty Party”.⁷⁵ I have therefore termed the deduced bill the ‘World Sovereignty Act’. The World Sovereignty Act abolishes nation-states and brings nuclear weapons under unified control for the greater good—indeed, survival—of Terro-Humanity. (As we will see below, however, its true name may be the ‘Act of Global Union’.)

But one nation needs one language, to eliminate the linguistic and cultural differences that usually lead to international conflict. Thus, Lingua Terra, the common tongue during most of the Federation’s history, probably begins developing just after WWIV, concurrent with global unification. The new language most likely grows organically, through the mixing of various Southern peoples while “the new civilization” develops. However, it could be a created language, like Esperanto. If so, then Lingua Terra might actually be a key element in the (Southern) First Federation’s program to preserve Terro-Humanity. In addition to promoting unity, a pre-planned single language would also facilitate the assimilation of Northern Hemispheric refugees, as represented in the person of General Lanningham. These multinational refugees could number in the millions—potentially, hundreds of millions—so a common language would help to prevent any renewal of the Northern nationalist quarrels that resulted in the Third and Fourth World Wars, not to mention the non-nuclear First and Second.

In my paper “TF HQ”, I deduced that Montevideo, in South America, becomes the new capital city of the Terran Federation, after the former World Capital, St. Louis in North America, is destroyed. St. Louis may be destroyed during WWIV, but as we will see, this more likely occurs in the debacle of AE 114.

10. The Secession of Venus

Over the next sixty-five years, the new Southern civilization develops uninterruptedly. But in AE 174, the colonies on Venus collectively secede from the First Terran Federation. “And after Venus seceded from the First Federation, before the Second Federation was organized.”⁷⁶ The Secession apparently fails, because in “The Future History”, Beam mentions “Wars of colonial pacification and consolidation; the new [Second] Federation imposes System-wide pax.”⁷⁷ This suggests that Venus is ‘pacified in war’, it is defeated. If the Federation were not victorious, it wouldn’t be able to ‘impose’ anything, let alone a “System-wide pax”.

Also, if we assume that the Secession had succeeded, Venus would probably have become an independent planet, just like the worlds of the System States Alliance seven centuries later, if they had defeated the Federation in the Big War.⁷⁸ But Venus remains in the Federation. Furthermore, if Venus and the other planetary colonies achieved actual equality with Terra in the early Federation, not only the symbol but the *name* of the organization would have changed. Perhaps to the Solar Federation, similar to “the Solar League” of Piper and John McGuire’s novel *Lone Star Planet*.⁷⁹ The Terran globe would then have been replaced by Sol, changing the Federation’s flag from a wreathed globe to a ‘wreathed sun’. But this also does not happen.

So the most likely scenario is that the Secession fails. Presumably the Venusians, like the Alliance planets later on, “took themselves outside the Federation economic orbit and the Federation crushed them.”⁸⁰ But though outright independence is denied, the colonial worlds are actually granted greater stature in the early Federation; they graduate from “colonies”⁸¹ to “Member Republics”.⁸² Perhaps Venus put up a stiff enough fight to gain the respect of the Terrans, and a realization that the best way to pacify all extraterrestrial colonies in the long term is to give them a greater role, and therefore stake, in the Federation. However, the home planet’s dominance of the Federation is confirmed, not only because Terra remains the central symbol in its flag, but because in *Space Viking*, Piper says that “The good men all left to colonize, and the stuffed-shirts and yes-men and herd-followers and safety-firsters *stayed on Terra and tried to govern the Galaxy.*”⁸³

Although not made explicit by Beam, the fact that WWIV is the ‘First’ Interplanetary War means that the Secession of Venus could be called the ‘Second Interplanetary War’. And there may be a few more,

since imposing a “System-wide pax” suggests that the Second Federation has to engage in military actions—or at least shows of force—on Mercury, Mars, the Asteroid Belt and the moons of Jupiter and Saturn. Multiple interplanetary wars in the THFH again parallel “Doc” Smith’s novel *Triplanetary*, in which “Those interplanetary wars are of course inevitable, and will serve to strengthen and to unify the government of the Inner Planets...A solid, unshakeable union.”⁸⁴ Piper’s “wars of pacification and consolidation” in the Solar System sound very similar, and after the somewhat shaky First Federation—disrupted by WWIV and the first two (if not more) Interplanetary Wars—is replaced, the Second Terran Federation is a solid, unshakeable union for many centuries thereafter.

But Smith wasn’t his only inspiration for the early Federation. Anyone interested in Piper’s Future History would do well to read *Between Planets*, by Robert Heinlein. Published in 1951, *Between Planets* tells the story of the secession of Venus from the Terran Federation, an interplanetary state. Yes, you read that right; before Piper’s Terran Federation and Secession of Venus, there was Heinlein’s. That Beam borrowed the idea is confirmed by two things. First, both authors use the same historical model for the conflict. Heinlein’s Venusian characters compare their secession to the American Revolution,⁸⁵ and as we will see, Piper’s hidden scheme of historical models also aligns the Secession of Venus with the American Revolution. Second, *Uller Uprising*, which John Carr calls “the foundation of Piper’s monumental Terro-Human Future History, the first story where we encounter the Terran Federation”,⁸⁶ was in fact published just one year after *Between Planets*, in 1952.

Thus, in addition to owing “a great debt” to Dr. John D. Clark’s essay which prompted Beam to write *Uller Uprising*,⁸⁷ it appears we must also acknowledge a debt to Robert A. Heinlein.

Like Piper, Heinlein was not explicit, but the sense I get from *Between Planets* is that Terra and Luna, neighboring planets in space, parallel Britain and Ireland, neighboring islands in the ocean. Terra’s colonies on subtropical Venus and subarctic Mars, across interplanetary space, seem to parallel Britain’s warmer American and cooler Canadian colonies, across the Atlantic. The Federation’s smaller and more distant colonies on the moons of Jupiter (and probably in the Asteroid Belt, as well as on Titan and Mercury) parallel the various small Caribbean island colonies, farther from Great Britain.

Heinlein’s secession of colonial Venus is provoked by the tyrannical rule of the Terran Federation,⁸⁸ paralleling the tyrannical rule of King George over the American colonies. In the end, Venus wins the war, echoing the success of America’s revolt, while in Piper, we’ve seen that the Secession of Venus probably fails. What determines the difference?

Hyperdrive.

In *Between Planets*, Venus is on the verge of defeat. Terran Federation troops have landed on what few cities they have—a parallel of Great Britain’s occupations of New York and Philadelphia, among others—and only scattered forces in the Venusian backswamps remain free to continue the fight. But due to the interplanetary efforts of a secret scientific group known as “The Organization” (another name later found in Piper; 1955’s “Time Crime”),⁸⁹ Venus succeeds in building the first hypership, the *Little David*. Propelled by a prototype hyperdrive engine and armed with untested weapons, the *Little David* races for Mars, where a normal-space Federation task force is already headed; its mission to “liquidate the Organization”, which is headquartered there.⁹⁰ Utilizing its vastly superior speed, the *Little David* intercepts and destroys the spherical Federation ships—another concept borrowed by Beam—and Venus is free! Well, not quite; the characters mention their desire to live under a more democratic system, implying that if the Terran Federation loosens its grip, Venus will remain part of it.⁹¹

In the Terro-Human Future History, however, Venus is apparently defeated because hyperdrive is not invented until after the war, thereby making a Venusian ‘victory from the jaws of defeat’ moment impossible.⁹² But its development occurs right around the same time as Heinlein’s, supporting the derivation. Keene, Gonzalez and Dillingham come up with their “Theory of Non-Einsteinian Relativity” right before the Secession, in AE 172. The “Dillingham Hyperdrive” itself, however, is not invented until AE 183, or nine years after the Secession, and the first interstellar expedition leaves for Alpha Centauri in AE 192, nine years after that.⁹³

We can add that Beam’s Keene-Gonzalez-Dillingham Theory and the Dillingham hyperdrive seem very similar to Heinlein’s versions. These are called “The Horst-Milne Equations” for “The Generation of Space-Time Discontinuities”, and “the Horst-Milne-Conrad drive”.⁹⁴

Also notable is that Robert's secessionists call their planet the "Venus Republic" or "Republic of Venus".⁹⁵ Compare this to "the Federation Member Republic of Venus" in Piper.⁹⁶ Of course, that refers to the planet after the Secession is defeated. During their short stint of independence, Beam's Venusians may well call their planet the Republic of Venus or Venus Republic. And that could actually explain how his system of planetary Member Republics in the Second Federation began. Even though defeated, Venus set the new standard. By unifying all the colonies on their globe and standing up for their collective planetary rights, the Venusians made themselves 'equal' to the completely unified Terra.

The unification of Venus seemingly inspires the Federation to adopt the idea, because its "wars of colonial pacification" also include "consolidation". An early fruit of this new policy probably entails the forceful occupation of the Red Planet, and unifying the former 'Northern' (Sino-Hindic-Japanese-American-European) colonies into the Federation Member Republic of Mars. Presumably, the policy is next carried out on the similarly-fragmented colonies of Mercury Twilight Zone, Titan, and the moons of Jupiter. Henceforth, all colonies of the Terran Federation will be entire celestial bodies.

Now, let's look at the relative dates. Heinlein's secession of Venus occurs "more than five score years" after the Terran Federation builds the Circum-Terra space station, whose nuclear weapons keep all the nations of Earth under control.⁹⁷ It is hinted that the station was built around the time the Federation was formed, said formation occurring just after a Third World War. The main character in *Between Planets* takes a winged-rocket flight to the city of "New Chicago", musing upon arrival that "the former site of Old Chicago" was "still slightly radioactive". He later adds that an Atomic War had happened "once in the past".⁹⁸

As we have seen, in Piper's Future History the Terran Federation is formed just before WWIII, rather than just after, but this is close enough for comparison. Adding five score years to Beam's Thirty Days' War in AE 31 should place his Secession of Venus somewhere around AE 131; more than two decades, or well after, WWIV. This is indeed the case, as the Secession actually occurs in AE 174, making Piper's version more like 'seven score years' after the Terran Federation is formed.

But Beam didn't simply borrow Heinlein's 'future American Revolution' idea, he greatly improved and expanded on it. Robert apparently never did anything further with the Anglo-American historical models in *Between Planets*. His other 'juvenile' novels describe more near-future events, such as the colonization of Mars (*Red Planet*) and Ganymede (*Farmer in the Sky*), but don't seem to be set in the same future history. For example, *Time for the Stars* (early interstellar colonization) mentions a "Planetary League" on Earth instead of the Terran Federation, while in *Starman Jones* (later interstellar colonization) there is an organization officially called the "Solar Union", but which is in fact an Empire.⁹⁹

Piper, however, seems to have grasped the possibilities. For if the near-future Secession of Venus is modeled on the American Revolution, then there should be a 'First' Terran Federation before the Secession, and a 'Second' Federation afterward, paralleling the First and Second British Empires which preceded and followed the Revolution.¹⁰⁰ In addition, there should be events later in Federation history that parallel later British (or Anglo-American) events; such as the annexation of the Cape Colony Boers (paralleled by the Freyans), the Sepoy Mutiny (the Uller Uprising) and the American Civil War (System States War).

Thus, although inspired by Heinlein, Piper's use of British history to plot out the entire history of the Terran Federation became something much greater, and the Federation itself was only the first of his six future universal states, each much larger than the last. Moreover, British history wasn't his only model for the Federation; there's at least one other historical layer, and this 'two-tiered' (or perhaps multilayered) approach may well obtain for the five Galactic Empires. Assuming so, then the Terro-Human Future History was a veritable quantum leap in creativity over Heinlein, and anyone else with a future history. However, Beam's retention of 'the Terran Federation' and 'secession of Venus', instead of changing them to some other names, like he did with the Horst-Milne-Conrad drive, is, in my view, an open and honest acknowledgement of his debt to Robert.

11. Historical Models of the Early Federation

This brings us to Beam's historical models. Back in September of 2000, one of the 'keys' to the Terro-Human Future History occurred to me. An equation; AE 1 = 1601 AD. In other words, just add 1600 to Piper's AE dates to get the historical model. The Third World War occurs in AE 31; adding 1600 would

then equal 1631 AD, a date almost precisely in the middle of the Thirty Years War, which ran from 1618 to 1648. This gave new meaning to Beam's other name for WWIII, "the Thirty Days' War", and in hindsight it is a glaring clue. Adding 1600 to the date of the Secession of Venus then aligned AE 174 with 1774 AD; that is, the American Revolution.

The solution was simple, yet subtle; thus, it seemed to be "authentically Beam Piper".¹⁰¹

Importantly, the AE 1 = 1601 AD formula also revealed the model for Piper's Fourth World War. Beam mentioned this major event in several places (*Four-Day Planet*, *Uller Uprising* and *Crisis in 2140*), but provided very little information about it. WWIV obviously occurs after WWIII in AE 31, and before the Secession of Venus in AE 174. In the late summer of 2000, the only matching event that I could see involved "the old U.S. nuclear data that General Lanningham brought to South America after the debacle in the United States in A.E. 114". That date was between AE 31 and AE 174, and the departure of Lanningham for the Southern Hemisphere appeared to be related to the general "end of civilization in the Northern Hemisphere." Again adding 1600, AE 114 equated to 1714 AD. Though this was one year outside the range, I felt certain that the historical model for the Fourth World War was the War of Spanish Succession, which ran from 1701-1713.

That this line of reasoning was essentially correct was confirmed eight years later, when John Carr's biography of Piper was published. In Appendix B: "The Future History", Beam says that WWIV runs from AE 106-109. Adding 1600 would make that range 1706-1709; right in the middle of 1701-1713. Piper was working with *timelines*, rather than individual historical models at random. This made sense, because it would keep cause and effect relationships intact, allowing his Future History to progress just like real history. The deduction that Beam was working with timelines was also supported by two of his own statements in "The Future History". First, that "Dates AE and CE are converted by adding or subtracting 1943: thus 1964 CE is 21 AE, and 1066 CE is reckoned as 877 Pre-Atomic"; and second, the "Twentieth Century AE Corresponds to the First Century Imperial".¹⁰²

Using these phrases as a model, we can now state that the beginning of Piper's hidden scheme of historical models is 'dates AE and AD are converted by adding or subtracting 1600', and therefore 'First Century AE Corresponds to the Seventeenth Century AD'.¹⁰³ But as we will see, this correspondence only continues for the first few centuries of the THFH; the reason for this is the second 'layer' of historical models, which will be elaborated on below. But the historical models for Beam's early Federation events seem to line up like this.

The Terro-Human Future History

British (or Anglo-American) History¹⁰⁴

First and Second Terran Federations

First and Second British Empires (incl. the United States)

AE 1 WWII, Britain versus Germany. During the Battle of Britain in AE -3, a German 'air armada' is defeated over Britain and the English Channel.

c. 1601 AD Philip II's Wars, Britain versus Spain. In 1588 (or Year -13 from 1601) the Spanish Armada is defeated in the English Channel.

AE 30 Professor Ed Chalmers foreknows the future, including the violent death of Caliph Khalid and the impending destruction of major cities (possibly including London) in great nuclear fires during WWIII. He wrote a book on the French Revolution, and foresaw the *Kilroy's* trip to Luna. Ed also sees into the distant future, and keeps his predictions in file folders organized by 'century'. Professor Pottgeiter tells Chalmers that Nostradamus lived "about a century late"¹⁰⁵ for him; his area of expertise ends with the Fifteenth Century.

'1630' AD Michel de Nostredame sees into the future, including the violent death of King Henry II of France and the Great Fire of London. His foresight into the more distant future includes the French Revolution, Napoleon, World Wars I thru III, and Man landing on the Moon. His prophecies were published as "The Centuries". Nostradamus actually lived in the Sixteenth Century, 1503-1566, so '1630' is about a century late for him.

AE 31 The First Terran Federation begins, initially consisting of Terra and Luna, neighboring planets.

c. 1631 AD The First British Empire begins, initially consisting of Great Britain and Ireland, neighboring islands.

- AE 31 WWII, or “Thirty Days’ War”; the Terran Federation versus the Eastern Axis, or ‘capitalist league versus proletarian alliance.’ Main powers on the anti-communist side are the USA (the most powerful capitalist state), the British Commonwealth (England-Scotland), and the Islamic Caliphate (Middle East). The proletarian powers are the USSR (a great northern power), India (a peninsula), and Red China (the most populous nation).¹⁰⁶
- AE 53 The *Cyrano* Expedition departs Terra; it will rediscover ‘classical’ Martian culture for Terro-Humanity. Presumably this includes sites in the Martian region named ‘Hellas’ by Giovanni Schiaparelli, now known as Hellas Planitia.
- AE 53-4 The *Cyrano* is the first spaceship to reach Mars, followed by the main expedition on the *Schiaparelli*. With this voyage, Terro-Humanity returns to its planet of origin; its ‘garden of eden’. Mankind evolved on Mars, which thanks to Gio. Schiaparelli contains a region actually called ‘Eden’. The biblical ‘Terrestrial Paradise’ is really an *Extra-Terrestrial* one. Thus, the *Cyrano*’s crew are not the first men on Mars; just the first to return since the time of “Genesis”. The crew includes a French-Canadian officer, and among the remains of the last Martians, Dr. Dane begins to decipher their language.
- AE 106-109 WWIV, or “First Interplanetary War”. The democratic Terran Federation led by America against a totalitarian ‘Sino-Hindic Axis’ led by the Red Chinese leader; a new emperor, or ‘Son of Heaven’. The Chairman’s goal is to unite China and India into one preponderating empire able to rule Terra, and thus the Solar System. Main Sino-Hindic thrust is against the North American continent. General Lanningham brings a relieving TF Air-Navy from Japan to the US, and defeats the Sino-Hindic forces in the Battle of St. Louis on the Mississippi. He then proceeds from victory to victory, until the ‘Son of Heaven’ is totally defeated. America wins its fourth world war, but the entire Northern Hemisphere is devastated. The extraterrestrial theater includes battles between the Sino-Hindic and ‘Northern’ Federation colonies, mainly on Venus and Mars.
- AE 114 American “debacle”, or catastrophic defeat. After massive destruction in WWIV, the victorious United States tries to keep its ‘northern empire’ together, but fails. General Lanningham departs for South America
- 1631 AD Thirty Years War; the Catholic League versus the Protestant Alliance. Main powers of the Counter-Reformation are Spain (the most powerful Catholic state), the Polish Commonwealth (Poland-Lithuania), and the Holy Roman Empire (Central Europe). The Protestant powers are Sweden (a great northern power), Denmark (a peninsula), and France (the most populous European state, which even though Catholic, fought on the Protestant side).
- 1653 AD British archaeological expeditions to Greece; a “Greek Revival” of classical art in Europe follows, especially in Great Britain and France.¹⁰⁷
- 1655 AD Cyrano de Bergerac dies in Paris; his ostensibly-autobiographical *Voyage to the Moon* published posthumously. In it, Cyrano is launched by French soldiers from Quebec and journeys to the Moon, where he discovers the Garden of Eden. Mankind was actually created on Luna; the Terrestrial Paradise is really an Extra-Terrestrial one. Cyrano is therefore not the first man on the Moon, merely the first to return since Biblical times. During his stay on the Moon, Cyrano meets inhabitants outside the Garden. From them, he “learned to understand their language and to use it a little.”¹⁰⁸
- 1706-09 AD War of Spanish Succession, and the first transatlantic war. ‘Democratic’ Grand Alliance led by Austria versus the ‘Absolutist’ Franco-Spanish Alliance led by Louis XIV, the “Sun King”. Louis’ goal is to unite France and Spain into “one preponderating empire”¹⁰⁹ able to dominate Europe, and thus the world. The main Franco-Spanish thrust is against continental power Austria; the Duke of Marlborough brings a relieving army from England to the Continent, defeating the Franco-Spanish army near Vienna on the Danube. He never loses a battle, winning victory after victory, until the Sun King is totally defeated. The transatlantic theater involves battles between Franco-Spanish and British colonies in North America, known there as “Queen Anne’s War”.
- c. 1714 AD The ‘Great Northern War’ ends in disaster for Sweden at the Battle of Poltava. The Empire of Sweden, formerly the “Mistress of the North”,¹¹⁰ thereafter crumbles.

with old US nuclear data, and possibly everything else that can be saved from the disaster. Soon thereafter, the final remnants of North Terran civilization are destroyed.

AE 108-128 Terra becomes a “completely unified world, abolition of all national states under a single world sovereignty; colonies on Mars and Luna”. ‘Abolition’ implies that nations are legally abolished, so probably a World Sovereignty Act, or Act of Global Union, is passed by the Federation Parliament, now located in the Southern Hemisphere.

1708 AD Act of Union passed by Parliament in London; the British Isles are politically unified. British colonies in North America and the Caribbean.

AE 178 Secession of Venus; probably the Second Interplanetary War. With no outside help available, Venus is defeated by the First Terran Federation in one of the “Wars of colonial pacification and consolidation.” Implying that a few more interplanetary wars occur, elsewhere in the Solar System.

1778 AD American Revolution; the second major transatlantic war. Covertly and then overtly aided by France, the American colonies are ultimately victorious against the British Empire.

AE 183 “The First Terran Federation [interplanetary] is dissolved and the Second Terran Federation [interstellar] begins.”¹¹¹ “[T]he new [Second] Terran Federation imposes System-wide pax.”

1783 AD Treaty of Paris signed between Britain and the the new United States; American independence is confirmed. The First British Empire (transatlantic) ends, and the Second British Empire (global) begins.

c. AE 206 Freya acquired by the Terran Federation. Terrans free the Freyans from Styphoni oppression, are “surprised” to find that Freyan firearms are “almost exactly like guns...in museums in Cape Town and Johannesburg, which had been used in the Great Trek.”¹¹² The Terrans will soon use Freyan mercenaries to settle the planet’s other two continents.¹¹³

1806 AD Britain acquires the Cape Colony Boers. Subsequent efforts by British authorities to end slavery prompts many fundamentalist Boers to leave the Cape with their black servants. Between 1835 and 1840, about 10,000 cross the Orange River and embark on the ‘Great Trek’, settling new areas which become the Orange Free State and Transvaal.

Here the close numerical parallels seem to end.¹¹⁴ *Four-Day Planet* contains references to *Moby-Dick* and illegal off-planet slavery; the latter strongly opposed by the Terran Federation, which sends a Space Navy destroyer to transport the captured ringleader. This places the story in a parallel of the first half of the Nineteenth Century, when whaling was widespread but the slave trade was slowly being stamped out, mainly by the Royal Navy of Great Britain. *Four-Day Planet* should therefore occur not long after “When in the Course—”; sometime around AE 235, paralleling 1835. However, internal evidence reveals that the story actually takes place circa AE 495, and adding 1600 to this date results in 2095 AD. That means *Four-Day Planet* occurs ‘about two and a half centuries late’ in Piper’s Future History.

Also, the Uller Uprising is known to be modeled on the Sepoy Mutiny in India, which occurred in 1857-58. In the AE 1 = 1601 AD equation, 1857 should parallel AE 257, but the Uprising actually occurs in AE 526. Beam apparently just flipped the first two numbers and subtracted one from the last (257-527-526), yet this means *Uller Uprising* occurs ‘about three centuries late’.

Moreover, the System States War is modeled on the US Civil War, but the Civil War began in 1861, which using the formula should parallel AE 261. The System States War actually begins almost six centuries later; in AE 842. (A number, incidentally, which may have been chosen to evoke ‘1842’; that is, the mid-Nineteenth Century.) In addition, the Sepoy Mutiny broke out only four years before the Civil War began, so the Uller Uprising should happen only four years before the System States War begins. But in fact, 315 years separate the two events.

Thus, sometime around “When in the Course—”, Piper appears to have ‘stretched out’ his timeline of

British (or Anglo-American) historical models. And that's because he was not just modeling British history for the Federation, but Roman history, as well. A two-tiered, or *creative combination*, of timelines. The British Empire only lasted about 350 years, but the Terran Federation lasts for over a millennium; clearly a much closer parallel with the thousand-year Roman Republic. The Roman 'layer' explains such details as the references in *Uller Uprising* to Rakkeed as "that geek messiah", Carlos von Schlichten as "General Pontius von Pilate", as well as "the Terran Pax".¹¹⁵ The Uller Uprising is actually a combination of the Sepoy Mutiny and the Jewish Revolt (or Revolt of the Zealots), the latter occurring around the beginning of the *Pax Romana*, in the same century as Jesus of Nazareth.

The 'key' to comparing the Federation timeline with that of Rome would therefore be roughly 'AE 1 to 1000 equals 500 BC to 500 AD'. The Messiah was crucified around 33 AD, or roughly 533 years after Rome achieved independence from Etruscan domination circa 500 BC. This is similar to the geek messiah on Uller, who is beheaded 526 years after the Atomic Era began, or roughly 500 after the Federation was organized.

The Roman layer of historical models also sheds light on why the Federation is passively headed for an irreversible breakup two centuries after defeating the System States Alliance. Since Piper's model for the System States War was the US Civil War, the postwar Federation should actually enjoy explosive growth and a burgeoning of power, because after defeating the Confederate States the United States enjoyed explosive growth in the Industrial Revolution and went on to become a great world power. The opposite happens to the Terran Federation because the System States War is actually a combination of the Civil War and Rome's 'breakdown and recovery' period in the Third Century AD. After that collapse, the much weakened Empire was on the road to eventual dissolution in the Fifth Century.

In addition, the Roman layer explains the appearance of Neobarbarians after the fall of the Federation, plus the later extensive raids by Space Vikings. These are modeled on the Germanic barbarians whose invasions destroyed the Western Roman Empire in the Fifth Century, followed several centuries later by the depredatious Age of the Vikings.

The Atomic Era dates for later Federation events are therefore dependent on dated Roman events, rather than those of the British Empire. Since Piper was working with timelines, the British parallels undoubtedly still occur in the correct chronological sequence; however, I must admit to a couple of gaps where Beam's historical models are not clear to me. These include the Svants of "Naudsonce" and the Kwanns of "Oomphel in the Sky".

For a complete comparison of the Terran Federation with its British and Roman historical models, as well as the possible dual models for the various Galactic Empires, see my forthcoming paper, "Piper's System".

ENDNOTES

1. Creation

1. H. Beam Piper, *Empire* (New York, NY: Ace Books, 1981), p. 41
2. Ibid., pp. 47-48
3. Ibid., p. 21
4. Ibid.
5. Ibid., p. 16
6. Ibid., pp. 30, 31
7. Ibid., p. 30

2. Organization

8. John F. Carr, *H. Beam Piper: A Biography* (Jefferson, NC: McFarland & Co., 2008), p. 212
9. Piper, *Empire*, pp. 16-17
10. Ibid., p. 13
11. Ibid., p. 55
12. H. Beam Piper, *Uller Uprising* (New York, NY: Ace Books, 1983), p. 55
13. Ibid., p. 14

3. The U.S. Lunar Base

14. H. Beam Piper, *The Worlds of H. Beam Piper* (New York, NY: Ace Books, 1983), p. 30
15. Robert A. Heinlein, *Rocket Ship Galileo* (New York, NY: Charles Scriber's Sons, 1947), pp. 171-172
16. Author uncredited, "Invasion Base on the Moon", *Mechanix Illustrated*, April 1948, p. 60
17. Ibid., p. 62
18. On the DVD edition of the year 2000, this speech is found in Chapter 3, Rocketeering Basics. The establishment of the Moonbase itself is dramatized in *Project Moonbase*, *Destination Moon's* much inferior sequel.
19. Piper, *Empire*, p. 22
20. Robert A. Heinlein, *Requiem* (New York, NY: Doherty Associates, LLC, 1992), p. 95
21. Ibid.
22. Ibid., p. 96

4. "Operation Triple Cross...Saved the Country"

23. Piper, *Empire*, p. 56
24. Ibid., pp. 55-56

25. Ibid., p. 56

26. Ibid, p. 47 The words are actually spoken by Dean Whitburn, but he is simply relating what he considers the ravings of the “madman” Chalmers to the group investigating the professor.

5. The End of the Soviet Union

27. Piper, *Worlds*, p. 199, emphasis added

28. Ibid., p. 84

29. Ibid., p. 85

30. Ibid., p. 143

6. “Some Kind of a World Empire”

31. Piper, *Empire*, p. 47

32. H. Beam Piper, *Federation* (New York, NY: Ace Books, 1981), pp. 4, 19; Carr, *Piper Biography*, p. 212

33. Piper, *Federation*, p. 46

34. Carr, *Piper Biography*, p. 212

35. Piper, *Worlds*, p. 85

36. H. Beam Piper and John J. McGuire, *Crisis in 2140* (New York, NY: Ace Books, 1957), p. 9 In that novel, the old Security Council of the United Nations has been replaced with a “Central Diplomatic Council” in the Reunited Nations. (ibid.)

37. Piper, *Worlds*, p. 145

38. Piper, *Empire*, p. 225 This quote is in error. The Interstellar Era presumably begins around AE 200, not long after the first interstellar trip to Alpha Centauri, which occurs in AE 192. The First Century IE would then roughly correspond to the Third Century AE. Moving backward along the timelines, the First Century Pre-IE would correspond to the Second Century AE, and the Second Century Pre-IE to the First Century AE.

Thus, “the Third Century Pre-Interstellar” would correspond to the First Century Pre-Atomic, which runs from 1843-1942 AD. Great Britain cannot possibly join the Terran Federation in that century, because the Federation does not yet exist. Nor the United Nations, for that matter. But if its accession occurs not long after the Third World War, the corrected quote would read “in the Second Century Pre-Interstellar”, meaning that Britain joins the Terran Federation ‘about a century later’ than Piper says it does. That would connect this quote with Beam’s Nostradamus, Professor Chalmers, who appears in the Future History about a century late. (See section **Historical Models of the Early Federation.**)

Assuming this line of reasoning is correct, then the mistake was on purpose, making “the Third Century Pre-Interstellar” reference one of Piper’s ‘deliberate errors’.

39. Ibid., p. 16

40. Ibid., p. 55

41. H. Beam Piper, *Space Viking* (New York, NY: Ace Books, 1963), p. 106

42. Piper, *Empire*, p. 57

43. Piper, *Worlds*, p. 173

44. Ibid., p. 96

45. Ibid., p. 85
46. Ibid., p. 100
47. Ibid., p. 99

7. A Promising New Era

48. John F. Carr, Introduction to *Federation*, p. xxviii
49. Piper, *Worlds*, p. 100
50. Edward E. "Doc" Smith, *Triplanetary* (New York, NY: Pyramid Books, 1965), pp. 89-90

8. The Fourth World War

51. H. Beam Piper, *Four-Day Planet/Lone Star Planet* (New York, NY: Ace Books, 1961), pp. 229-230
52. Piper, *Uller Uprising*, p. 169
53. Ibid., p. 150
54. Carr, *Piper Biography*, p. 212
55. Piper, *Worlds*, pp. 174, 175
56. Ibid., pp. 172-173
57. In the classic episode, "The City on the Edge of Forever".
58. Piper, *Federation*, pp. 206, 213
59. Piper, *Uller Uprising*, pp. 150, 64 In *Crisis in 2140*, these are collectively called "the frightful nuclear weapons of that period." (Piper and McGuire, *Crisis*, p. 12)
60. Piper, *Uller Uprising*, p. 64
61. Ibid.
62. Piper and McGuire, *Crisis*, p. 12
63. Ibid., p. 13
64. Piper, *Worlds*, p. 173
65. Ibid., p. 174
66. Ibid., p. 85

9. "The Rise of the New Civilization"

67. Piper, *Empire*, pp. 21-22
68. Piper, *Uller Uprising*, p. 64
69. H. Beam Piper, *Lord Kalvan of Otherwhen* (New York, NY: Ace Books, 1965), p. 3
70. Piper, *Uller Uprising*, pp. 186-187

71. Ibid., p. 64

72. See my forthcoming paper, “The Inevitable Catastrophe”—Piper’s Unwaged WWV”.

73. Piper, *Uller Uprising*, p. 150

74. Piper, *Four-Day/Lone Star*, p. 193

75. Piper, *Worlds*, p. 104

10. The Secession of Venus

76. Piper, *Space Viking*, p. 13

77. Carr, *Piper Biography*, p. 213

78. Piper, *Federation*, p. 197 and *Space Viking*, p. 10 In the first reference, Conn Maxwell says that “if the System States had won, half of them would be at war among themselves now.” The success of the Alliance would then ironically have resulted in its own undoing, as its member planets began going their own ways, eventually falling into conflict with each other. In *The Cosmic Computer*, this outcome is phrased as “Interplanetary wars; what we fought the Alliance to prevent.” (H. Beam Piper, *The Cosmic Computer* (New York, NY: Ace Books, 1963), p. 227)

79. Piper, *Four-Day/Lone Star*, p. 224

80. Piper, *Federation*, p. 197

81. Piper, *Empire*, p. 22

82. Piper, *Four-Day/Lone Star*, p. 7

83. Piper, *Space Viking*, p. 9, emphasis added

84. Smith, *Triplanetary*, pp. 89-90

85. Robert A. Heinlein, *Between Planets* (New York, NY: Charles Scribner’s Sons, 1951), pp. 83, 90

86. John F. Carr, Introduction to *Uller Uprising*, p. vi

87. Ibid. Though Smith and Heinlein were direct influences, stories articles and letters in the early pulp magazines “led to a kind of consensus view of the future and the conventions by which it could be described.” (James Gunn, *Isaac Asimov: The Foundations of Science Fiction* (New York, NY: Oxford University Press, 1982), p. 27) According to Gunn, “Doc” Smith in particular was responsible for the creation of “What author Jack Williamson called “the central myth of the future” [which] begins with the expansion of humanity into the galaxy in the same way that Europe ventured forth in the Age of Exploration to discover and then to colonize the rest of the world.” (ibid., p. 38)

88. Heinlein, *Between Planets*, p. 83

89. Ibid., p. 178 and Carr, *Piper Biography*, p. 98 Piper’s version of “the Organization” is not interplanetary but intertemporal (or rather, paratemporal) in scope, and its purpose is not for the betterment of humanity but its enslavement. (H. Beam Piper, *Paratime* (New York, NY: Ace Books, 1982), pp. 184, 210)

90. Heinlein, *Between Planets*, pp. 191, 214

91. Ibid., p. 205

92. Another factor in Venus’ defeat is the lack of an outside power to provide support and divert Terra’s attention elsewhere with more important enemies. The French surreptitiously aided the rebels from the start, and after the American victory at Saratoga agreed to a formal alliance. This forced the British to redeploy some of their forces to protect their Caribbean colonies, thereby keeping them from concentrating on those in North America. The existence of France, a great power and rival of Britain, was therefore a crucial element in the American Revolution’s final victory

over the British. But in Piper, the Terran Federation is a universal state—there are no planets independent of Earth, much less one that is a major rival, which can help the Venusians.

Heinlein presumably got around this difficulty by creating “the Organization”, which is a secret group ‘independent’ of the Federation’s authority. The Organization develops the technologies which enable the *Little David’s* hyper-flight to Mars and destruction of the Federation task force; this parallels the timely arrival of the French Navy near Yorktown, which prevented the British Navy from resupplying Cornwallis, forcing his surrender and ending the war.

93. Carr, *Piper Biography*, p. 213

94. Heinlein, *Between Planets*, pp. 196, 216

95. *Ibid.*, pp. 70, 96

96. Piper, *Four-Day/Lone Star*, p. 7

97. Heinlein, *Between Planets*, p. 83 Heinlein had apparently rethought the 1947 lunar base concept from *Rocket Ship Galileo*, reasoning that a missile base orbiting Earth would do the ‘world supremacy’ job more effectively. In another one of his juveniles, *Space Cadet*, this is phrased as, “Granted that you can bomb a city from Moon Base, you can do a better, more accurate job, with less chance of hitting the wrong people, from close by.” (Robert A. Heinlein, *Space Cadet* (New York, NY: Charles Scribner’s Sons, 1948), p. 133)

But in *Space Cadet*, which was published a year after *Rocket Ship Galileo* and three years before *Between Planets*, we actually find an intermediate concept. The nuclear missiles are not stored on the Moon or an orbital base, they are simply in polar orbits around the Earth. These free-flying “atom-bomb rockets”, to use Heinlein’s description, are routinely inspected by manned ships of the Solar Patrol. (*ibid.*, pp. 129-133; they also appear in *The Rolling Stones*, 1952, p. 91) Thus, Robert apparently rethought that idea, too, because free-flying nuclear missiles would presumably be vulnerable to space debris, not to mention being hijacked by anyone with a rocketship and a grudge. Better to keep such doomsday weapons in a single, enclosed location—like an orbital base.

However, even Heinlein’s orbital base in *Between Planets* has a major flaw—it is not exclusively a military installation. The Circum-Terra station is a combination “weather observation station, astronomical observatory, meteor count station, television relay, guided missile control station, high-vacuum strain-free physics laboratory, strain-free germ-free biological experiment station, and...a freight and passenger transfer station in space”. (Heinlein, *Between Planets*, p. 68) The guided missiles are also there; “variously estimated between two hundred and a thousand”, these are “enough A-bomb rockets to smear any force or combination of forces that could be raised to oppose the Federation”, or if necessary, “every last city on Earth!” (*ibid.*, pp. 82, 77)

The strange amalgamation of functions at Circum-Terra would be like placing NORAD headquarters and all of America’s ICBMs in a city near a major airport! Talk about security problems. No military or political leader worth his salt would allow such an arrangement. And in fact, Heinlein’s Venusian rebels just walk in and take over the station, without a shot being fired! Not only should the A-bomb rockets and control station be in an orbit separate from the civilian facilities, they should be heavily guarded.

98. Heinlein, *Between Planets*, pp. 13, 77

99. Robert A. Heinlein, *Time for the Stars* (New York, NY: Charles Scribner’s Sons, 1956), p. 141 and Robert A. Heinlein, *Starman Jones* (New York, NY: Charles Scribner’s Sons, 1953), pp. 9, 77

In *Time for the Stars*, during the interstellar voyage of the *Lewis and Clark* the Planetary League evolves into the United System. In *Starman Jones*, the interstellar Solar Union is run by an Imperial Council; one would assume that there is an Emperor, but this is not made explicit.

100. Dr. Christopher Bayly, editor, *Atlas of the British Empire* (New York, NY: The Hamlyn Publishing Group, 1989), pp. 65-66 Thus, Heinlein may in fact have used the Anglo-American historical models in another ‘juvenile’. *Starman Jones* identifies one Imperial official of the Solar Union; “His Supreme Excellency, General Sir John Fitzgerald Coburn, O.B.E., K.B., O.S.U.,...Imperial Ambassador to Hespera and Resident Commissioner Plenipotentiary”. (Heinlein, *Starman Jones*, p. 97) His name sounds British, and his titles certainly are; O.B.E. is Order of the British Empire, and K.B. Knight of the Bath. (O.S.U. probably stands for Order of the Solar Union). The Solar Union, an interstellar empire, may therefore be modeled on the Second British Empire; a later and ‘alternate’ phase of Heinlein’s Terran Federation, which was modeled on the First British Empire.

11. Historical Models of the Early Federation

101. Jerry E. Pournelle, Preface: Piper’s Foundation, *Federation*, p. viii

102. Carr, *Piper Biography*, pp. 212, 214

103. Piper was a lover of history, but anti-religious, so he did not use 'AD'; Anno Domini, or Year of Our Lord. He used CE, or Common Era (formerly Christian Era), favored by modern historians. I retain AD as a simple way to differentiate my analyses of his historical models from his own statements about the Future History.

104. Beam was apparently not an absolutist, as the British layer actually contains a few French and other general European elements (such as Cyrano de Bergerac and The Great Northern War). But the Terran Federation is undoubtedly modeled on the British Empire, which is why I do not call it a 'European' layer.

105. Piper, *Empire*, p. 59 See my paper "Professor Chalmers—Piper's Nostradamus" for an in-depth analysis of the parallels between the two men.

106. See my forthcoming paper "Piper's WWII—From Thirty Years War to Thirty Days' War" for more.

107. Roland and Francois Etienne, *The Search for Ancient Greece* (New York, NY: Harry N. Abrams, Inc., 1992), pp. 34, 44 The initial expeditions to Greece were followed by a general European interest in rediscovering the ancient civilizations of the entire Near East. This means that later archaeological expeditions to the Red Planet should investigate Martian parallels of Near Eastern regions. And Schiaparelli thoughtfully provided the planet with areas such as Arabia, Libya, Aethiopia, and a Martian Egypt. See my paper "Beam's Mars Revealed" for much more.

108. Cyrano de Bergerac, *Voyages to the Moon and Sun* (New York, NY: Orion Press, 1962), p. 97 Again, see "Beam's Mars Revealed" for more.

109. Sir Edward S. Creasy, *Fifteen Decisive Battles of the World*, (Harrisburg, Pennsylvania: Stockpole Books, 1960), p. 270

110. Robert K. Massie, *Peter the Great: His Life and World* (New York, NY: Ballantine Books, 1980), p. 289 See my forthcoming paper "Piper's WWIV—From War of Spanish Succession to War of Indian Election".

111. John F. Carr, timeline in *Empire* Readers will notice that I changed his timeline's date for the Secession of Venus from AE 174 to 178. This was done because the AE dates for the Thirty Days' War and WWIV aligned perfectly with their historical models. The American Revolution actually began in 1775, at Lexington and Concord, and ran until 1781, with the victory at Yorktown. The exact midpoint of 1775-1781 is 1778, meaning that the Venusian Secession should occur around AE 178. But the war must last at least a couple of years, so AE 178 would most likely be the midpoint, making the actual range of the Secession something like AE 177-179, or AE 176-180.

Atomic Era 176 would of course parallel 1776 AD, the iconic year of the Declaration of Independence. That could explain why Piper did not provide the exact years of the Secession in "The Future History", when he did so for WWII, WWIV and the development of hyperdrive. It would be too big a hint as to his underlying scheme of historical models.

Assuming that the range AE 176-180 is correct, then three years after the Secession of Venus ends, the First Federation is replaced by the Second Federation, similar to how the end of the American Revolution was followed two years later by the beginning of the Second British Empire.

I do not know how John Carr originally calculated AE 174 for the Secession of Venus and AE 183 for the establishment of the Second Federation. But I believe the former was very close to correct, while the latter was exactly right. A tribute to his analytical skills, no doubt, and a lucky break for me, because John's timeline in *Empire* played a very important role in helping me decipher Beam's system of historical models.

112. Piper, *Federation*, p. 230

113. *Ibid.*, pp. 206, 275

114. The close numerical parallels may actually end with "When in the Course—". Because in that story, other alien-inhabited planets such as Thor, Loki and Yggdrasil have already been admitted to the Terran Federation. (Piper, *Federation*, p. 206) And that's not counting *uninhabited* planets that have probably been colonized by this time, such as Odin and Baldur, whose populations are entirely human. Thus, the date of "When in the Course—" is more likely several decades later. Possibly AE 234, paralleling 1834, just before the Great Trek. This would align the story with the Trek Boer-parallel firearms found on Freya. (See my paper "The Origin of the Freyans" for much more.)

115. Piper, *Uller Uprising*, pp. 50, 144, 187