

OVERVIEW OF HISTORICAL MODELS IN THE EARLY FUTURE HISTORY

PART ONE



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APRIL 2019

LAST MODIFIED: JANUARY 25, 2021

1. The First Key

Back near the end of the Twentieth Century, on 1 July 2000, I began seriously researching the works of H. Beam Piper. I was trying to figure out his Terro-Human Future History, as daunting and doubtful a task as that seemed. However, since John Carr had written in one of his early newsletters that he and Jerry Pournelle had discovered Beam's overall historical template, I thought that it had to at least be possible. The timing must have been right, because after writing down the handful of thoughts that had occurred to me over the years, inspiration arrived, and ideas began to flow in ever greater numbers. And before summer's end, I discovered what I believe to be one of its 'keys'.

A simple 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", ¹ and in hindsight it is a glaring clue.

The AE 1 = 1601 AD formula also revealed the model for the Fourth World War. Piper 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 probably sometime before the Secession of Venus in AE 174 (timeline in *Empire*). In the 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". ² That date was between AE 31 and AE 174, and the departure of Lanningham for the Southern Hemisphere appeared to be related to "the end of civilization in the Northern Hemisphere and the rise of the new civilization in South America and South Africa and Australia." ³ A catastrophic decivilizing of half the globe could only be the result of an Atomic War, which therefore must have occurred around AE 114.

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. A hunch effectively confirmed eight years later, when Mr. Carr's biography of H. Beam Piper was published. Because Appendix B is "The Future History", a short summary written by Beam, which gives the date for WWIV as AE 106-109. ⁴ Adding 1600 would make that range 1706-1709; right in the middle of 1701-1713.

The equation also works for the next two major events in the Future History. The timeline in *Empire* places the secession of Venus in AE 174, and adding 1600 makes its historical model 1774 AD; that is, the American Revolution. As discovered by Carr, Piper appears to have modeled the Terran Federation on the British Empire. The Federation has a British-style Parliament, "the Federation government most closely approaches that of Georgian England—a representative government with colonies and member states", its chartered planetary companies parallel entities like the British East India Company, and the Uller Uprising is modeled on the Sepoy Mutiny. ⁵

Thus, it occurred to me that the First and Second Terran Federations are actually based on the First and Second British Empires. "The concept of a first and second British Empire was developed by historians in the late 19th century, and is a concept usually used by advanced scholars." ⁶ I presumed that Beam, a largely self-taught scholar who loved history and "had read more books than most professors", was familiar with this distinction. ⁷

The reason advanced scholars divide the British Empire in two is the American Revolution. A major historical event, the Revolution was the catalyst for "The Fall of the First British Empire", a limited realm centered on transatlantic trade between Great Britain and its North American colonies and Caribbean islands; and the subsequent "Rise of the Second [British] Empire", which in the following (Nineteenth) century gained control over the whole world's oceans and became a global superpower ruling vast stretches of Asia, Oceania and Africa. ⁸

Piper similarly relates the Secession of Venus to the end of the First and beginning of the Second Terran Federations. "And after Venus seceded from the First Federation, before the Second Federation

was organized.”⁹ The secession therefore seems to be the catalyst for the fall of the First Terran Federation, an interplanetary organization confined to the Solar System, and centered on normal-space trade between the ‘great island’ of Terra and its ‘continental’ Venusian and Martian colonies, as well as with such minor celestial ‘islands’ as Ceres, Callisto, Ganymede and Titan; followed by the rise of the Second Terran Federation, which in the following (Third) century AE begins its interstellar expansion of colonization and hyperspace trade to eventually become a vast ‘empire’ spanning at least 500 worlds spread over “a space-volume of two hundred billion cubic light-years.”¹⁰

The timeline in *Empire* placed the end of the First Federation, and rise of the Second Federation, in AE 183. This is exactly right, as adding 1600 results in 1783, the very year the Treaty of Paris was signed, and which historians typically use as the date marking the end of the First British Empire and the beginning of the Second.¹¹ Wars are usually concluded by treaties, so it seems likely that the Treaty of Paris, which officially ended hostilities in 1783, is paralleled by a similar document in AE 183 (which I tentatively dubbed the ‘Treaty of Venus’), that in Piper’s Future History marks the end of the First Terran Federation and the beginning of the Second.

With the equation AE 1 = 1601 AD in mind, further research revealed answers as to who Professor Chalmers is modeled on, why the first spaceship to Mars is named the *Cyrano* (including its implications for the human remains found there, and why one of the crewmembers is French-Canadian), the possible model for General Lanningham, the model for global Terran unification around the time of WWIV, why Freya has three continents but only one is currently inhabited, who the sub-sapient kholphs are modeled on, and the appearance of Lt. Ranjit Singh in *Four-Day Planet*. The ‘key’ even seems to work for Beam’s non-THFH tale *Lone Star Planet*, as well as the rise of the Free Scientists in “The Mercenaries”.

My conclusion was that Piper was working with *timelines*, rather than individual historical models at random. This made sense, for two reasons. First, because it would keep cause and effect relationships intact, allowing his Future History to progress just like real history. And second, because almost his entire published literary opus was concerned with historical timelines. The Terro-Human Future History itself was a timeline of Man’s expansion into the Galaxy, while his Paratime series literally involved a near-infinity of timelines, all of which were based on alternate probabilities of various historical (and para-historical) events.

So what does this mean for the early Federation? First, the equation supports the dates in the *Empire* timeline for the Secession of Venus and rise of the Second Federation as essentially correct. Piper’s short chronology of “The Future History”, which implies that the Second Federation is formed right after WWIV,¹² is therefore in error. This is not a major obstacle, since that document contains several other provable mistakes, most notably an almost 150-year error in the dating of *Four-Day Planet*. Furthermore, the 63 years between WWIV and the development of hyperdrive theory are covered in just two vague sentences. The Secession of Venus and its date are not even mentioned.¹³

Second, by analyzing the historical models, I was able to deduce previously-unknown details about these Federation events; most notably the participants, courses and outcomes of WWIII and WWIV. It also revealed new events; including a possible colonial war between WWIV and the Secession of Venus; and much later, two wars between Terra and Freya, probably during the breakup of the Federation. The following is an overview of my findings. Section two lists the future events and their parallels in chronological order, often with a short description; and then section 3 goes into more detail, fleshing out these events with details derived from their historical models.

2. List of Piper’s Future Events and their Historical Models

- a) AE 31-183 = 1631-1783 AD. The First Terran Federation, whose end in AE 183 is related to the Secession of Venus, is modeled on the First British Empire, which ended in 1783 due to the results of the American Revolution.
- b) circa AE 3-22 = 1603-1622 AD. Although not part of the THFH, the bands of Free Scientists in “The Mercenaries” apparently really are modeled on the *condottiere* bands of the Italian Renaissance, as great *condottiere* leaders lasted until about 1680.

c) AE 28 = 1628 AD. In AE 28, the iconic first landing of Americans on the Moon, an airless ‘rock’ and the first ‘new world’ visited by Man, roughly parallels the no-less-iconic landing in ‘1628’ (actually 1620) by the Pilgrim Fathers at Plymouth Rock, in the New World.

d) AE 30 = 1630 AD. Professor Edward Chalmers, who ‘foreknows’ the future, is modeled on the seer, physician, scholar and professor Michel de Nostredame, better known as Nostradamus. Both men foresee very similar events; such as rockets to the moon, cities destroyed by great fires, world wars and the sudden death of current leaders. Chalmers organizes his notes on future events in file folders by ‘century’ (as in the Twentieth Century file), while Nostradamus organized his visions into ‘The Centuries’; groups of one hundred quatrains pertaining to various future events. Nostradamus actually lived from 1503-1566, not 1603-1666; meaning that Piper’s Nostradamus, Ed Chalmers, appears “about a century late” in the Future History, as suggested by Max Pottgeiter.¹⁴

e) AE 31 = 1631 AD. The Thirty Days’ War (AE 31) is modeled on the Thirty Years War (1618-1648). The Wars of Religion in the Seventeenth Century, which pitted Catholics against Protestants, are paralleled by the ‘Wars of Ideology’ in the Twentieth Century, with Capitalists fighting the ‘Proletarians’, or Communists. The Protestant Reformation is therefore paralleled by the Proletarian Revolution, while the Catholic Counter-Reformation has its parallel in the Anti-Communist Crusade of the capitalist nations.

f) circa AE 32-60 = 1632-1660 AD. The future years of Prof. Chalmers are modeled on the second half of Nostradamus’ life (actually 1532-1560). Queen Catherine de Medici made Nostradamus a Councillor of King Charles X of France, which means Ed Chalmers eventually becomes a close advisor to the leaders of the United States and/or Terran Federation, probably in regard to postwar recovery and planning for the future.

g) AE 53 = 1653 AD. The *Cyrano* Expedition to Mars is modeled on Cyrano de Bergerac’s interplanetary ‘expedition’, his ostensibly-autobiographical novel *Voyage to the Moon*. The real de Bergerac can be considered an early science-fiction author, whose *Voyage* was written around 1648, though not published until 1657, two years after his death. The midpoint between 1648 and 1657 would be the year 1653; this is paralleled by AE 53, when the Federation spaceship *Cyrano* is ready to set off on its voyage to Mars. (Incidentally, this parallel supports Old Mars as the birthplace of Terro-Humanity, as will be shown in the overview section.)

h) circa AE 53-153 = 1653-1753 AD. In addition to *Cyrano*, the initial exploration of Old Martian ruins by Federation archaeologists is also modeled on the Seventeenth Century British (and other European) expeditions which began studying the ruins of Ancient Greece, and collecting its art and artifacts. These expeditions later expanded in scope to investigate all the ancient civilizations of the Near East. And after “Omnilingual”, the ancient ruins lying all over the Red Planet will be similarly studied. (This parallel also supports an Old Martian origin for Terro-Humanity.)

i) circa AE 57-105 = 1657-1705 AD. The competing national claims to the various ‘new worlds’ of the Solar System, which threaten to break up the First Federation,¹⁵ are modeled on the competing claims by European nations to the New World (particularly North America), which threatened to cause major wars.

j) AE 106-109 = 1706-1709 AD. The Fourth World War is modeled on the War of Spanish Succession (1701-1713). Louis XIV, the “Sun King”, whose Absolutist regime tried to unite France and Spain into “one preponderating empire” able to dominate Europe and thus the world,¹⁶ is the model for a new “Son of Heaven”, or Chinese leader, whose ‘absolute’ or totalitarian regime tries to unite China and India into a single empire able to dominate Terra, and thus the whole Federation.

k) AE 106-109 = 1706-1709 AD. WWIV is also called “the First Interplanetary War”.¹⁷ This means that its extraterrestrial theater is modeled on Queen Anne’s War, which was the “North American theater of the War of Spanish Succession.”¹⁸ Queen Anne’s War “produced few memorable hostilities”,¹⁹ so the battles on colonial Venus and Mars are presumably minor compared to those taking place on North Terra.

i) AE 106-119 = 1706-1719 AD. The end of the Fourth World War does not signal the end of hostilities in North Terra; there are “minor wars for ten years after”.²⁰ The thirteen years covered by WWIV and its aftermath, which causes the “Complete devastation of [the] Northern Hemisphere of Terra”,²¹ could then be called the ‘Great Northern Hemispheric War’. Thus, this period also seems to parallel the Great Northern War, as AE 106-119 equates to 1706-1719, which falls within that war’s range of 1700-1721.

m) circa AE 107 = 1707 AD. The unification of Terra circa “2050 to 2070” (AE 107-127)²² is modeled on the unification of Britain in 1707. The Acts of Union politically united Scotland and England “into One Kingdom by the name of Great Britain”.²³ Similarly, Piper’s “abolition of all national states” is presumably by an act of the Federation Parliament, by which the Terrans “made one nation out of all our people”.²⁴ And due to the devastating effects of WWIV, the Federation legislature moves from the Northern to the Southern Hemisphere, becoming the first Parliament of a completely unified Terra. This parallels how the Scottish Parliament traveled south to London, and joined with the English legislature to become the first Parliament of a unified Britain.

n) AE 114 = 1714 AD. General Lanningham, who may have been a major Federation commander in WWIV, could be modeled on the British Duke of Marlborough, the greatest military commander of the War of Spanish Succession. After WWIV, and due to some sort of “debacle in the United States”, Lanningham moves to South America in AE 114.²⁵ And after his achievements in the War of Spanish Succession, Marlborough fell out of favor at Court, and went south into exile on the Continent, from 1712-1714.²⁶

o) circa AE 156-163 = 1756-1763 AD. In addition to the secession of Venus mentioned by Otto Harkaman, Professor Chalmers foresees “the revolt of the colonies on Mars and Venus.”²⁷ This may be the same event. However, since Harkaman does not mention the secession of Mars, it could actually refer to a separate conflict. And between Queen Anne’s War and the American Revolution, there was another major colonial war in North America. This was the French and Indian War, which could therefore be paralleled by a ‘Sino-Colonial’ war on Venus and Mars. If so, this would be the Second Interplanetary War, and one of the “Wars of colonial pacification and consolidation” mentioned by Piper.²⁸ The effects of the French and Indian War led to the American Revolution, so the effects of the deduced Sino-Colonial War may similarly lead to the Secession of Venus.

p) circa AE 174-181 = 1774-1781 AD. The Secession of Venus, possibly the Third Interplanetary War, is modeled on the American Revolution. The Thirteen Colonies banded together against the tyrant King George, and declared their independence, almost exactly sixty years after Great Britain itself was unified. Similarly, the formerly-loyal colonies on Venus unite roughly sixty years after Terra is completely unified, and secede from a First Federation which has become ‘tyrannical’. The fledgling American Republic is paralleled by a ‘Venusian Republic’, while the Martian colonies parallel the Canadian colonies (Nova Scotia, Newfoundland, St. John and Quebec) which did not revolt against the British. (Thus, the Future History owes a big debt to Heinlein’s ‘juvenile’ novel *Between Planets*. More in the overview section.)

q) AE 183 = 1783 AD. The First Terran Federation ends in AE 183, and the Second Federation begins; this parallels the end of the First British Empire in 1783, and the beginning of the Second. The historical Treaty of Paris is presumably paralleled by a ‘Treaty of Venus’. The Treaty of Paris recognized American independence, establishing the US as an ‘equal’ but separate nation from Britain. The deduced ‘Treaty of Venus’ should therefore recognize Venus as an equal of Terra. However, since Venus does not become an independent planet, it must become equal within the Federation. That would seem to make this the point at which Federation Member Republics begin, with the Venusian Republic becoming the first one.

r) AE 192 into the Third Century = 1792 into the Nineteenth Century AD. The end of the First Federation in AE 183 coincides with the development of the Dillingham hyperdrive, which leads the Second Federation in a new direction—out to the stars, beginning in AE 192.²⁹ This is modeled on the ‘swing to the east’ of the Second British Empire, which, after the First Empire lost Britain’s western colonies in 1783, embarked on a new direction of colonization and conquest in the Eastern Hemisphere.³⁰ The Second Terran Federation’s new direction could then be called a ‘swing to the stars’.

s) AE 192 into the early Third Century = 1792 into the early Nineteenth Century AD. The Second Federation's early extraterrestrial colonies, particularly those which possess native sapient races like Thor, Loki and Yggdrasil, parallel the Second British Empire's early overseas possessions in Africa, India, the East Indies and Australia.

t) circa AE 206-234 = 1806-1834 AD. One of the earliest acquisitions of the Second British Empire was the Cape Colony, formerly a Dutch possession populated by the non-British Boers. And one of the earliest acquisitions of the Second Terran Federation is Freya, populated by a group of non-Terran humans. In "When in the Course—", Piper mentions the Boers in relation to the Freyans, and a Boer character is the first Terran to speak. Thus, the Terran annexation of Freya, which presumably occurs sometime in the early Third Century AE, is modeled on the British annexation of the Dutch Cape Colony in the early Nineteenth Century AD.

u) circa AE 235 = 1835 AD. The Great Trek, beginning in 1835, is paralleled by a 'great trek' on Freya, presumably beginning circa AE 235. This results from Roger Barron's decision "to collect a lot of free-companies and use them in colonizing the other continents."³¹ Sending these mercenaries great distances across the sea, and settling them on the two uninhabited continents of Freya, is therefore modeled on the Great Trek; during which many Boers left the Cape Colony, traveled a great distance, and founded two new Boer nations in South Africa; the Orange Free State and Transvaal. This explains why Freya has three continents but only one is inhabited when the Terrans first arrive. For when the British took over the Cape Colony, the Orange Free State and Transvaal did not yet exist.

v) circa AE 235 = 1835 AD. The Freyan kholphs, who are sub-sapient and yet "are smart...They use tools",³² would then be modeled on the primitive black tribes of South Africa. The kholphs do not appear in "When in the Course—", probably meaning they are discovered when the Freyan mercenaries colonize the other two continents. This would parallel the black tribes encountered by the Boers during the Great Trek; such as the Xhosa and Zulus. Piper might then have derived the name kholph (kolf) from 'kaffir', the collective (and derogatory) name for black Africans used by white South Africans.

w) AE 250 = 1850 AD. *Lone Star Planet* roughly parallels the Mexican-American War (1846-1848). Although like "The Mercenaries" it does not belong in the THFH, the Piper-McGuire novel takes place in "Anno Domini 2193".³³ This equates to Atomic Era 250, which when 'translated' by the equation (add 1600) becomes 1850 AD. Though the exact date is not quite right, the novel's historical model is revealed to be in the correct era; the mid-Nineteenth Century.

At about this point in the Terro-Human Future History, the AE 1 = 1601 AD equation no longer applies, as the close numerical parallels seem to end. Piper's next story, *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—the era of *Moby-Dick*, 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 240, paralleling 1840. (Parenthetically, this date explains the appearance of Lt. Ranjit Singh, whose model is the real Ranjit Singh, maharaja of the Punjab from 1801-1839.) 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 later than it should in Piper's Future History.

Also, the Uller Uprising is known to be modeled on the Sepoy Mutiny in India,³⁴ which occurred in 1857-58. Using the AE 1 = 1601 AD formula, 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 became 527 then 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 equation should parallel AE 261. The System States War actually begins almost six centuries later; in AE 842. (A number which may have been purposely chosen to evoke '1842'; again, 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, Piper appears to have ‘stretched out’ his timeline for the later Federation events. Why would he do that? Because he was not just modeling British history for the Federation, but Roman history as well. A two-tiered system, or creative combination, of historical models. The British Empire lasted about 350 years, but the Terran Federation lasts for over a thousand; clearly a much closer parallel with the millennium-spanning Roman Republic and Empire. The Roman layer will be discussed elsewhere; for now, let’s take a look at each of the early Federation events in more detail, based on their British models.

3. Overview of Piper’s Future Events and their Historical Models

a) AE 31-183 = 1631-1783 AD. The First Terran Federation parallels the First British Empire.

In truth, historians date the First British Empire as 1583-1783.³⁵ Since AE 1 = 1601 AD, the parallel of 1583 would be 18 years before AE 1, which is 18 pre-Atomic. In the Future History, 18 pre-Atomic would be 1925. And at that time the League of Nations had only existed for a few years. Thus, the first two unsuccessful attempts to create an international peacekeeping organization (League of Nations, United Nations) roughly parallels the first two unsuccessful British attempts to create a transatlantic ‘empire’ in North America.

The settlement at Roanoke didn’t last; it was founded in 1585, failed the next year, and then was refounded in 1587, only to disappear before 1590.³⁶ The settlement at Jamestown, which did last, wasn’t founded until 1607. The year 1607 parallels AE 7. And in AE 7, or 1950, the United Nations had similarly been in existence for just a few years. Major Cutler says that the Terran Federation will “take the place of the U. N.”, meaning that to some extent, it is a continuation of that organization.³⁷

So while the First Terran Federation is modeled on the First British Empire, it might be more accurate to state that it includes the initial attempts to create “some kind of a world empire”,³⁸ the ineffective League of Nations and its moderately more effective successor the United Nations (both of which ultimately failed), in addition to the First Federation itself. Thus, if we accept the view of historians, the more proper range of years would then look like this:

a) circa pre-Atomic 17-AE 183 = 1583-1783 AD. The League of Nations/United Nations/First Terran Federation parallels the First British Empire.

b) AE 3-22 = 1603-1622 AD. From “Free Companies” (Italian *Condottiere*) to Free Scientists.

Although this concept does not belong in the Future History proper, the equation AE 1 = 1601 AD still seems to apply. For “The Mercenaries” mentions “the scientist-adventurer” in “hundreds of independent research-teams that had sprung up after the Second World War.” Piper compares them to the Italian *condottiere*. “And, because scientific research is pre-eminently a matter of pooling brains and efforts, the independent scientists had banded together into teams whose leaders acquired power greater than that of any *condottiere* captain of Renaissance Italy.”³⁹

The Free Scientists exist from circa 1946 to at least 1965 (the date of “The Mercenaries”), which equates to AE 3-22. Adding 1600, this becomes 1603-1622. And though the *condottiere* arose in the Thirteenth and Fourteenth Centuries, they actually lasted to about 1680. “Therefore, in Italian historiography, the term Condottiero...includes Italian generals fighting for foreign nations or Italian states in early modern conflicts such as the [Renaissance Wars](#) and the [European Wars of Religion](#).” The last major *condottiere* leader was Raimondo Montecuccoli (1609-1680), and their last major conflict was “[The Wars of Castro](#) (1641—1649)—between Popes [Urban VIII](#) and [Innocent X](#) and the [Duchy of Parma](#).⁴⁰ Thus, the Free Scientists of the First Century AE really do seem to parallel the *condottiere* of the Seventeenth Century AD. This suggests that Piper’s reference to them was not just drawing a parallel, but a deliberate hint at their historical model.

Beam’s “scientist-adventurer” would then be modeled on the “venture captains”, or “*capitani di ventura*” who were “contracted by the Italian city-states and the Papacy”, and “later [became] generals of national or multi-national armies”.⁴¹ These elements are paralleled by the fact that Team leaders like Duncan MacLeod accept contracts for jobs involving single nations as well as multinational entities. Such

as Australia ("The West Australia Atomic Power Plant"), Spain ("The Segovia Plutonium Works"), America ("The sea-water chemical extraction plant in Puerto Rico"), Belgium ("The hard-won victory over a seemingly insoluble problem in the Belgian Congo uranium mines"), the Western Union (the Philadelphia Project) and the Islamic Kaliphate ("for whom they had once worked" on an unspecified job, possibly related to "the Al-Borak Undertaking").⁴²

Renaissance Italy actually makes a pretty good parallel with Twentieth Century Terra. The dynamic, prosperous and competitive city-states of the Renaissance were all located in northern Italy; and the prosperous and competitive nation-states of the Twentieth Century were all located in the Northern Hemisphere. The nominal capital of disunited Italy was Rome, the seat of the Papacy and capital of the Papal States, which controlled central Italy. This is paralleled by the United States, which controls central North America, and contains the nominal capital of the disunited world; New York, the seat of the UN.

The Papal States' major rival for Italian dominance was the Holy Roman Empire, a great northern power which often threatened to conquer northern Italy, if not the whole peninsula. And the United States' major rival for global dominance was the Soviet Union, a great northern power which threatened to conquer the Northern Hemisphere, if not the whole world. Thus, another way to view it is that the north Italian city-states, located between the Papal States and the HRE, parallel the nation-states of Europe between the United States and the USSR. Roughly two centuries after 1680, fragmented Italy was finally unified into one nation; and in Piper's Future History, about one century after 1965 nation-states are abolished, and the fragmented globe is finally unified.

Moreover, the *condottiere* services in the Wars of Religion in the Seventeenth Century—Catholic versus Protestant—precisely parallels the Free Scientists, who serve during the 'Wars of Ideology' in the Twentieth; Capitalist versus Proletarian, or Communist. (See section on the Thirty Days' War, below.)

However, the disappearance of the *condottiere* before 1700 suggests that the teams of Free Scientists will not exist for much longer, presumably disappearing not long before AE 100 (which by adding 1600 equals 1700). The *condottiere* were superceded by regular armies, so the Free Scientists will be superceded, and/or incorporated into, the regular military-industrial complexes of the various world powers. One would think that 'free' scientists would naturally prefer 'freedom', as well as clients who can pay the most. Thus, the Team members are more likely to join the capitalist Free World than the poorer Communist Bloc. This would parallel the Italian *condottiere*, who as Catholics seem to have usually fought for the Counter-Reformation against the 'revolutionary' Protestants.⁴³

The disappearance of the Free Scientists is actually foreshadowed in "The Mercenaries". Because their freedom to practice their craft is precarious. They have "what amounts to extraterritoriality", but they don't possess the armed forces which can uphold their rights. Thus, as Duncan MacLeod puts it, "we enjoy this status only on sufferance. The nations of the world tolerate the Free Scientists only because they need us, and because they know they can trust us."⁴⁴ Even in the tolerant and democratic United States, which values freedom very highly, there is hostility toward the independence of the Free Scientists. General Nayland blames the MacLeod Team for leaks from the Tonto Basin Research Establishment, he "hates our Team", and "would love to get some of us shot" for espionage. And the research-contract system gives men like Nayland the legal means to do so. "[O]ur contract specifically gives the United States the right to take action against us in case we endanger the national security."⁴⁵

Endangering national security is a pretty broad statement which can easily be abused. And this clause is probably typical of Team contracts with other governments. Thus, if they can be hated and potentially shot in America, they are likely even more vulnerable when working for less-democratic organizations. Such as Piper's Fourth Komintern (communist Eastern Axis in the THFH), where 'freedom' is a dirty word, national security means anything and everything the State wants it to, charges of espionage are frequently trumped-up, and innocent people often shot at spies and traitors.

Heym ben-Hillel adds that General "Nayland is only a symptom of the enmity which politicians and militarists [presumably around the world] feel toward the Free Scientists, and of their opposition to the research-contract system."⁴⁶ In countries which are less advanced and less democratic than those of the West, the Free Scientists are certainly needed more, but probably also distrusted and therefore hated more. The MacLeod Team has been physically attacked at least once, so by extension, the other Teams have undoubtedly faced similar difficulties as those mentioned by Duncan. "Of the treachery of the Islamic Kaliphate, for whom they had once worked, of the intrigues and plots which had surrounded them

in [formerly-fascist] Spain; of the many attempted kidnappings [one of them by Russian agents] and assassinations; of the time in Basra [capital of the Kaliphate] when they had fought with pistols and tommy guns and snatched-up clubs and flasks of acid to defend their laboratories.”⁴⁷

Farida Khouroglu observes that “it would be a fine thing if governments start putting Free Scientists on trial and shooting them...In a few years, none of us would be safe.” And her lover Kato says “that could happen.”⁴⁸ One would therefore guess that, eventually, it does happen. Members of one or more Teams become traitors, as Adam Lowiewski betrays the MacLeod Team.⁴⁹ Or they are falsely accused, tried and shot. When either one happens, or both, it will likely spell the beginning of the end of the Teams. Because only a few incidents like this will cause governments and Team members to lose confidence in the research-contract system. The “trust” mentioned by MacLeod will be lost.

This loss of trust would parallel the *condottiere*, whose treachery contributed to their decline. “The mercenary captains often were treacherous, tending to avoid combat, and “resolve” fights with a bribe—either for the opponent or for themselves.”⁵⁰ Another failing is mentioned by Piper through Macchiavelli. “*Mercenary captains...are either very capable men or not. If they are, you cannot rely upon them, for they will always aspire to their own greatness, either by oppressing you, their master, or by oppressing others against your intentions; but if the captain is not an able man, he will generally ruin you.*”⁵¹

And these characteristics of aspiring to their own greatness and susceptibility to bribery are what cause Adam Lowiewski to betray the MacLeod Team. First, he has an overinflated sense of his own importance. “He was one of the greatest of living mathematicians by anybody’s reckoning—the greatest, by his own.” He explains complex equations “with obvious condescension” to Kato Sugihara, and when his treachery is uncovered, he sneers, “You were [all] glad enough to have me correct your stupid mathematical errors.” This causes MacLeod to voice Adam’s personality flaw, and the bribe he accepted to betray them. “He’s the great Adam Lowiewski. Checking math for a physics-research team is beneath his dignity. I suppose the Komintern offered him a professorship at Stalin University.” He was watching Lowiewski’s face keenly. “No,” he continued, “It was probably the mathematics chair of the Soviet Academy of Sciences.”⁵²

In addition, MacLeod at first can’t even be sure which member of his Team betrayed them, as the majority possess traits which make them susceptible to bribery by the Komintern. Suzanne Maillard “had to clear out of France because of [leftist] political activities, after...the establishment of the Rightist Directoire in ‘57...and was at the University of Louvain in the early ‘50s, when that place was crawling with Commies.” The impressionable Sir Neville Lawton “dabbles in spiritualism; he and Suzanne do planchette-seances. A planchette can be manipulated. Maybe Suzanne produced a communication advising Sir Neville to help the Komintern.” Rudolf von Heldenfeld apparently grew up in Nazi Germany, and “always had a poor view of the democratic system of government. He might feel more at home with the Komintern.” As for Heym ben-Hillel, when the Komintern invited the MacLeod Team to work on the Red Triumph Five-Year Plan (Soviet parallel of the Philadelphia Project), he “was in favor of accepting. Now that, I would say, indicates either Communist sympathies or an overtrusting nature.”⁵³

If the majority of the MacLeod Team—“the best physics-research team in a power-mad, knowledge-hungry world”—is of questionable loyalty, then the integrity of the other Teams is probably even more suspect. Duncan repays Adam’s treachery with death behind closed doors, precisely in order to prevent a public scandal and demonstrate “that the MacLeod Team is worthy of the status it enjoys and the responsibilities concomitant with it.”⁵⁴ But the other Teams will probably fail to deal with cases of bribery and treachery as effectively or privately, and the fatal flaws of the Italian Free Companies will be repeated in the global Free Scientists.

So this will result in the loss of trust in the Teams, which will probably soon be followed by the loss of the “need” mentioned by MacLeod. Because to ensure their own safety from charges of bribery, treachery, espionage and ‘endangering national security’ (possibly false in some cases, but likely true in others), some Free Scientists will probably begin leaving the Teams to accept permanent positions in the various national and multinational science laboratories, just as Lowiewski tried to do with the Komintern. These institutions will presumably possess the legal, financial and military power to adequately support and protect them. The loss of talented scientists will begin to degrade the quality of the Teams, while simultaneously begin to improve the quality of the national and international labs. Thus, the various national governments and international organizations will start to have less need for the services of Free Scientists, and the Teams will begin dissolving.⁵⁵

The eventual preeminence of establishment labs would then parallel another aspect of the decline of the *condottiere*, mentioned previously; their replacement by regular armies. “[T]he venture captains...in the end proved quite unequal to the gendarmerie of France and the improved troops of the Italian city-states, [and] gradually disappeared.”⁵⁶ Adapting that quote to the Free Scientists means that one could say, ‘in the end, the roving scientist-adventurer proved quite unequal to competition from the improved national and international laboratories, and gradually disappeared.’

Nevertheless, the Free Scientists should have a hundred years or so to make their mark on human history; from circa AE 3 to AE 97 (1946-2040 AD). And if the future of their timeline parallels that of the THFH, that mark could include adventures on the ‘new worlds’ (extraterrestrial colonies) of the late Twentieth and early Twenty-First Centuries. For the presence of ‘condottiere’ (mercenaries) was not unknown in the New World.

Now let’s get back to the Future History.

c) AE 28 = 1628 AD. The Rocky Moon parallels Plymouth Rock.

The iconic first landing by Americans on the Moon in AE 28, an airless ‘rock’ and the first ‘new world’ visited by Man, roughly parallels the no-less-iconic landing in ‘1628’ (actually 1620) by the Pilgrim Fathers at Plymouth Rock, in the New World.

The Pilgrims had a rough time of it. The voyage across the North Atlantic took them through storms, and they were unable to reach their original destination at the mouth of the Hudson, forcing them to settle at Massachusetts Bay. They landed too late in the year to begin farming, and suffered sickness and starvation through the first winter, losing about half their number in the process. In addition, the climate of North America had greater extremes of temperature than those they were used to in Europe. It took a while for the Pilgrims to adapt to this new environment. Moreover, until they became self-sufficient, they were dependent on England for supplies. Lack of resupply could doom the colony, as it did the earlier one at Roanoke, Virginia.⁵⁷

The first Americans on Luna presumably have similar difficulties. First, their voyage out is fraught with peril. Their nuclear-powered rocket could explode at any time, killing them or marooning them in outer space; their flight takes them through regions where cosmic radiation, meteors and solar storms threaten; and if their course is only slightly off they could miss the Moon, finally dying of starvation or asphyxiation in deep space. And possessing no rotation or atmosphere, Luna has days and nights of two weeks’ duration, with extremes of temperature far greater than those the Americans are used to on Terra. Adapting to this new environment will take some time, and may cost some of them their lives. Moreover, the first outpost is not self-sufficient; it depends on resupply rockets to bring in more stores of food, water and oxygen, not to mention the tools and materials needed to construct a permanent base. Even then, they will remain dependent on Terra for some time. Because in 1974, there is a whole set of rocketports in America which keep the US Lunar base supplied.⁵⁸

The Pilgrims were aided by the local Amerinds, who gave them gifts of corn, and showed them how to live off this new land. Unfortunately for the Americans, there are no Selenites on lifeless Luna who can help them adjust with gifts of ‘moon-maize’ and other extraterrestrial novelties. But the technology of these Space Age pilgrims is thankfully far more advanced than that of their historical model, which should minimize their difficulties.

The English colonies in the New World proliferated fairly quickly, and they were soon joined by those of other nations; such as France, Holland and Sweden. This should mean that US outposts on Luna likewise proliferate after WWIII, and they are soon joined by those of several other powers. But this brings up the question of “national sovereignty over...Luna”, which was a major cause of the collapse of the United Nations before the war.⁵⁹ Since the Americans are the first to land, one might guess that they annex the Moon to the United States, making it a US territory. Other nations, particularly the Soviet Union and its allies, would naturally protest America’s right to own all of Luna. And given the surface area of the Moon (not much less than that of Asia), even America’s allies may dispute such a sweeping claim.

In the non-THFH story “The Mercenaries”, however, Suzanne Maillard says that when the first spaceship reaches the Moon, it will be annexed to the Western Union.⁶⁰ So in the Future History, this could mean that when the first Americans land on Luna, they annex it in the name of the United States and its allies. This effectively bans US enemies like the Eastern Axis from setting foot there, as only

friendly nations will be allowed to set up outposts. And even then, they likely have to develop their own rockets first, or purchase American ones.

Not long before WWIII, the US organizes the Terran Federation; a supranational organization in which nation-states seem to be subordinate to the Federation Government. At first, this probably only includes the US, its European and Asian allies, and other friendly powers; but after the Thirty Days' War, it seems to encompass the entire globe.⁶¹ So US and allied sovereignty over Luna is probably transferred to the Federation. Only Federation members can land on Luna and exploit its potentially vast resources, which is probably an incentive for many other nations to join the organization after the war. And since in the Thirty Days' War, the historical models of Russia and China are Sweden and France in the Thirty Years War (see that section), the French and Swedish colonies in the New World will be paralleled by Chinese and Russian colonies on the 'new worlds' of Luna and/or Mars. This in turn implies they join the Federation after WWIII. Possibly because the 'lunar gun' was held to their heads, forcing these defeated enemies into the organization created and dominated by the United States. Possibly also because of a change in their systems of government, which made them friendlier to the US. And in the non-THFH novel *Crisis in 2140*, postwar Russia at least is a democracy.⁶²

But this has taken us ahead of the story. So let's go back before the war to 1973, and the remarkable case of Professor Chalmers.

d) AE 30 = 1630 AD. Professor Chalmers—Piper's Nostradamus.

Professor Edward Chalmers, who 'foreknows' the future, is modeled on the seer, physician, scholar and professor Michel de Nostredame, better known as Nostradamus. Nostradamus organized his prophecies into "The Centuries"; groups of 100 quatrains pertaining to various future events. Ed Chalmers does something similar, organizing his notes on the events he foreknows into file folders by 'century', beginning with "the Twentieth Century file".⁶³ This implies there are others; the Twenty-First Century file, Twenty-Second Century file, Twenty-Third, and so on. But because these pertain to Piper's Future History, Ed's notes really refer to events in the First Century, Second Century and Third Century of the Atomic Era, which would then parallel—in number, not content—Nostradamus' quatrains of Century I, Century II, Century III, and so on.

Three of Nostradamus' most famous quatrains are said to refer to the violent death of King Henry II of France ("The young Lion shall overcome the old one/In martial field by a single duel"), the Great Fire of London in 1666 ("The blood of the just shall be dry in London, Burnt by the fire of three times twenty and six") and Man landing on the Moon ("He shall come into the corner of Luna, Where he shall be taken and put in a strange land").⁶⁴ He is also said to have predicted the atomic bombings of Hiroshima and Nagasaki.⁶⁵ Similarly, Professor Chalmers receives advance knowledge of the *Kilroy*, the first unmanned rocket to Luna; the violent death of the leader of the Islamic Caliphate, Khalid ib'n Hussein, by a lone assassin; the obliteration of Reno, Nevada in a huge explosion and fire; and the H-bombing of major cities like Los Angeles and San Francisco (and quite possibly London as well), the destruction of which will be due to 'great nuclear fires'.⁶⁶

Many quatrains of Nostradamus are interpreted as referring to WWI, WWII and a coming WWIII.⁶⁷ Since Piper's story occurs in 1973, Chalmers is of course too late to 'predict' WWI and WWII. But he mentions both in the story, he himself served in WWII, and "The Edge of the Knife" is mainly concerned with his foreknowledge of a looming Third World War, only a year away.⁶⁸ Plus, when his precognitive ability appeared in 1970, the first event he foresaw concerns "the world of 2050 to 2070". This means that Ed may also have advance knowledge of WWIV, which runs from 2049 to 2052.⁶⁹

After the great world wars, Nostradamus foresaw a millennium of peace for mankind, in which the whole world would finally be united. In Century IV, Quatrain 77 he says that "Kingdoms shall be united" under "a Christian King of the World"; and Century VI, Quatrain 70 is interpreted as meaning "The nations will organize a super-government covering the entire world." In his Epistle to King Henry II, Michel further adds that "there shall be renewed a reign of Saturn, and a golden age...there shall begin an age of universal peace...for the space of a thousand years".⁷⁰

Chalmers foresees something very similar. He knows that after WWIII, the Terran Federation will become "some kind of a world empire". This presumably means a supranational government including all the nations of the world; compared to the old, ineffective United Nations, which only included most of the globe. Also, Ed foreknows that "the world of 2050 to 2070" will be a "Completely unified world; abolition

of all national governments under a single world sovereignty".⁷¹ And as will be shown below, Ed's foreknowledge includes the more than thousand year history of the Terran Federation, which lasts from approximately AE 31 to 1097, or 1974 to 3040 AD. During the vast majority of this time, Terro-Humanity lives in peace and unity. The Third World War lasts for a single month in AE 31, WWIV lasts 3 years (AE 106-109), the Secession of Venus possibly 7 years (circa AE 174-181), and the System States War 12 years (AE 842-854). A rough estimate would therefore be 22 years of global, interplanetary, or interstellar war, compared to not much less than a thousand (947) years of peace.

At least three other major events predicted by Nostradamus have parallels in Piper's story. First, as a Frenchman, Michel appropriately wrote quite a few quatrains that seem to refer to the French Revolution; such as Century VI, Quatrain 23. "The people shall rise against their king...Paris was never in such great disorder". And as a history professor, Chalmers wrote many lines on the very same subject. He is "the author of a book on the French Revolution", and "They talked at random...for some time about his work, his book about the French Revolution, current events."⁷² Second, Nostradamus also allegedly foresaw the successful American Revolution ("The West shall be free of the British Isles"; Century VII, Quatrain 80), and Chalmers' foreknowledge includes "the secession of Canada from the British Commonwealth".⁷³ This essentially means 'the rest of the West shall be free of the British Isles'; that part of North America, even larger than the United States, which was not liberated from British rule in the Revolution.

And third, Nostradamus also appears to have foreseen a Union victory in the American Civil War; the success of President Lincoln in defeating the Confederacy ("the coming of the great lawgiver... shall raise the humble and vex the rebellious"; Century V, Quatrain 79).⁷⁴ Beam used the Civil War as the main model for the System States War, and he has Prof. Chalmers mention the secession and defeat of these future 'Confederate' rebels. "And the time he'd tried to get a copy of Franchard's *Rise and Decline of the System States*, which wouldn't be published until the Twenty-Eighth Century, out of the college library."⁷⁵

Even the seemingly minor detail of the author's name points to Michel de Nostredame. Because just as the French term "Communard" refers to a member or supporter of the Paris Commune in 1871,⁷⁶ the name 'Franchard' appears to mean 'a member or supporter of France or the French; a Frenchman'. The connections therefore go as follows. A Frenchman (Nostradamus) foresaw the French Revolution, and Professor Chalmers (a historian who parallels Nostradamus in the Future History) wrote a book about it; Nostradamus also foresaw the American Civil War, and Piper's Nostradamus foresees its Future History parallel (the System States War) as well as the future 'French' historian (possibly also a professor) who will write a book about it (Franchard).

Next, both Nostradamus and Chalmers become nationally famous after successfully predicting the death of a contemporary leader. Nostradamus achieved fame in France after the accidental death of its monarch, King Henry II, in 1559; which he predicted four years earlier, in Century I, Quatrain 35.⁷⁷ Likewise, Chalmers achieves national attention after his prediction of the death of Caliph Khalid is fulfilled. Leonard Fitch gives the story to a local paper, and it is soon picked up and broadcast by the national TV networks. "But the most amazing part of the story comes, not from Basra, but from Blanley College, in California," the commentator was saying, "Where, it is revealed, the murder of Khalid was foretold, with uncanny accuracy, a month ago, by a history professor, Doctor Edward Chalmers..."⁷⁸ A month ago means 'four weeks' earlier, paralleling the four years earlier of Nostradamus.

Both men face an 'inquisition'. "Nostradamus was summoned before the Inquisitor at Toulouse. This was the result of a chance remark made to an artisan, regarding a bronze model he was making of the Virgin, which the artisan mistakenly claimed to be heretical."⁷⁹ Another way to phrase "a chance remark" is an inadvertent or thoughtless comment. And Ed Chalmers faces a parallel 'inquisitor' after a few chance remarks spoken in his classroom. Without conscious thought, he accidentally mentions the assassination of the still-living Khalid ib'n Hussein. This leads directly to a "summons" from Dean Whitburn, who demands Chalmers' immediate resignation; and, failing in that, threatens to take him to court to prove him insane and revoke his tenure.⁸⁰

Furthermore, when the prediction of Khalid's assassination comes true a month later, Chalmers faces an even greater 'inquisition'; members of four different groups congregate to question the professor. These include the Board of Trustees of Blanley College, faculty members, the American Institute of Psionics and Parapsychology, and an Army major from the CIA. Ed's ability to foreknow the future is debated and his sanity questioned.⁸¹

Thus, another parallel between the two men is whether they are prophets or charlatans. Chalmers is derided by some (such as Dean Whitburn) as a complete fraud and indeed a “madman” and “lunatic”, a view shared by Ed’s students until Khalid is assassinated as predicted; and even laymen at a local café get into an argument about whether his ability is real or fake. Other people, however, including Leonard Fitch and Max Pottgeiter, firmly believe in Chalmers.⁸²

The reaction to Nostradamus, both in his own time and still in ours, was exactly the same. On the negative side, “The quatrains, published in a book titled *Les Prophéties* (*The Prophecies*), received a mixed reaction when they were published. Some people thought Nostradamus was a servant of evil, a fake, or insane”.⁸³ And today, “Most academic sources maintain that the associations made between world events and Nostradamus’s quatrains are largely the result of misinterpretations or mistranslations (sometimes deliberate) or else are so tenuous as to render them useless as evidence of any genuine predictive power.”⁸⁴

On the positive side, Michel’s “followers visited him from all parts of France”, and “many of the elite” believed in his as well. Most notably the Queen of France, Catherine de Medici, who “was one of Nostradamus’s greatest admirers.” Moreover, “In the years since the publication of his *Les Prophéties*, Michel has attracted a large number of supporters, who, along with much of the popular press, credit him with having accurately predicted many major world events.”⁸⁵ These include the aforementioned prophecies about the Great Fire of London, American independence and man landing on the Moon. In other quatrains, Nostradamus also appears to have foreseen Louis Pasteur (“A Pasteur as Demi-God shall be honored”; Century I, Quatrain 25), and the Spanish dictator Francisco Franco (“From Spanish Franco shall come the Assembly”; Century IX, Quatrain 16).⁸⁶ These seemingly-prescient predictions are paralleled by the fact that Chalmers’ foreknowledge of future events is real—though of course another reason for this is that it makes “The Edge of the Knife” a better story.

Because of their parallel controversies, both men therefore ‘conceal’ their talent. Nostradamus cloaked his visions in arcane quatrains to protect himself from accusations of sorcery by the Catholic Church, the supreme authority of his time. “Some accounts of Nostradamus’s life state that he was afraid of being persecuted for heresy by the Inquisition”, and “Feeling vulnerable to religious fanatics...he devised a method of obscuring his meaning by using “Virgilianized” syntax, word games and a mixture of other languages such as Greek, Italian, Latin, and Provencal.”⁸⁷ And in Piper’s story, Professor Chalmers similarly cloaks his ability by having himself declared insane to free himself from scrutiny by the supreme authority of *his* time. Since the Twentieth Century is a secular age, and the rational and agnostic Piper downplayed or mocked organized religion in his Future History,⁸⁸ this authority is not the Church but the United States Government. For if Dr. Hauserman finds that Chalmers is sane, his precognitive ability would be proven true, and this would make him of supreme importance to national security. What will Major Cutler of Central Intelligence, and more importantly his superiors, do then? Ed would almost certainly be detained by Federal authorities, and put under guard in a secret facility. His life would never be his own again.⁸⁹

Despite their parallel efforts at subterfuge, however, both men are incarcerated for a short time. Nostradamus was briefly imprisoned at Marignane, “purely because he had published his 1562 almanac without the prior permission of a bishop, contrary to a recent royal decree.”⁹⁰ And Ed Chalmers is confined to Northern State Mental Hospital, for “Maybe a year or so”, until he recovers from his presumed nervous breakdown.⁹¹

Ostensibly, Ed’s main reason for having himself committed is simple survival. He teaches at Blanley College, which “was at the center of one of the areas which would receive the worst of the thermonuclear hell to come”; while the mental hospital is “in the one part of the state [that will be] completely untouched by the H-bombs of the Thirty Days’ War”.⁹² By concealing his ability under the cover of insanity, Chalmers will therefore escape from being incinerated in a nuclear explosion. But this again parallels Nostradamus, whose concealment of his ability helped him avoid accusations of sorcery and heresy, which would probably have resulted in his being burned alive at the stake.

It is popularly believed that Nostradamus divined the future through “the ancient methods of flame-gazing, water-gazing or both simultaneously”.⁹³ Depicting Michel as actually seeing future events while looking into a bowl of water or a flame in his dimly-lit study is found in documentaries about him, such as “The Man Who Saw Tomorrow” (1981). Piper may have included both methods in his story, but he favored the second. For the first method, Ed’s foreknowledge of what happens to Reno, San Francisco

and other cities could be taken to mean that he ‘gazes into (foresees) the flames’ which cause their destruction. But the water-gazing method is the big one, found in Chalmers’ repeated use of liquid metaphors to describe how he receives knowledge of the future. He says it “would come *boiling up* in me. It just kept pushing up into my conscious mind.” The precognition about Khalid’s murder “had welled up suddenly and without warning into his conscious mind.” And during his interview with Dr. Hauserman, Chalmers’ memories of the future begin to “seep...[into] his consciousness”; he tries to “dam them back”, and then has to speak carefully so they don’t “leak into his speech.”⁹⁴ As if Ed’s mind is a bowl filled with water, and his future knowledge rises from the dark depths of his subconscious ‘well’ to the shining surface of his conscious state.

The way Chalmers persuades Dr. Hauserman that he’s had a nervous breakdown also points to Nostradamus. Ed deliberately loses control, ranting that “When this old body I’m wearing now was writing that book on the French Revolution, I was in Paris, watching it happen, from the Fall of the Bastille to the Ninth Thermidor.”⁹⁵ But notice that by having Professor Chalmers mention “watching it happen”, Beam was alluding to the popular belief that *Nostradamus* watched the French Revolution happen, from the Fall of the Bastille (predicted in Century III, Quatrain 50) to the Ninth Thermidor (Century II, Quatrain 42).⁹⁶ The belief that by looking into a flame or liquid, the French seer actually witnessed these events before they occurred.

There are a few more parallels between Michel and Ed. Before beginning his career as a seer, Nostradamus was a skilled physician.⁹⁷ And before his ability to foreknow the future came to him, Chalmers was likewise a skilled doctor. Just not of medicine; for Ed’s professional title is “Doctor Chalmers”, presumably having earned his Ph.D. in history.⁹⁸ Another parallel is that “the largely undated prophecies” of Nostradamus contain few precise dates, which is another reason why the quatrains are so hard to connect with actual events. In a similar fashion, Professor Chalmers admits that he “seldom ‘remembered’ an exact date”, which is why he doesn’t know precisely when Khalid will die.⁹⁹ And finally, both men foresee events from their own time into the far future. Nostradamus’ prophecies run from his time in the mid-1500s to the end of the world in 3797 AD; while Chalmers’ ability begins in 1970, from where he can foresee “the next five thousand years”.¹⁰⁰ Ed’s foreknowledge therefore ‘ends’ in 6970 AD, or roughly the year 7000. This, too, is apparently modeled on Nostradamus, who elsewhere mentions that after “Seven thousand years... Then is fulfilled and ends my prophecy.”¹⁰¹

The Nostradamus model can even explain a couple of errors Beam placed in “The Edge of the Knife”. “[D]etermined to renounce” his ability to ‘predict’ future events, Chalmers “began casting about for a subject which would occupy his mind to the exclusion of the future...He thought for a time of the Sepoy Mutiny, and then rejected it—he could “remember” something much like that on one of the planets of the Beta Hydri system, in the Fourth Century of the Atomic Era.”¹⁰² This certainly refers to the Uller Uprising, but that event doesn’t take place until AE 526, which is the Sixth Century AE, not the Fourth.¹⁰³

Beam’s error is solved by ‘adding two centuries’. Why add two centuries? Because that’s what Nostradamus did. Originally, he ended his prophecies with Century X, making an even thousand quatrains. “It was a great while before I could resolve to whom I should dedicate these last three Centuries [VIII, IX and X] of my Prophecies, which make the complete thousand.”¹⁰⁴ But for some reason, he later decided to add two more *Centuries*, though only a few quatrains from them survive. For Century XI, the surviving quatrains are 91 and 97, while Century XII still retains quatrains 5, 24, 36, 52, 55-56, 59, 62, 65, 69, and 71.¹⁰⁵

This would make Piper’s Fourth Century reference one of his ‘deliberate errors’. And confirmation is easily found, because on the very same page Ed mentions another future event containing a mistake which is ‘solved’ by adding two centuries. “But, as he walked home, he was struck by the parallel between the buccaneers of the West Indies and the space-pirates in the days of the dissolution of the First Galactic Empire, in the Tenth Century of the Interstellar Era.”¹⁰⁶ The Interstellar Era presumably begins in AE 192, when the development of hyperdrive enables the “First expedition to Alpha Centauri” to be sent out from Sol.¹⁰⁷ This is only a few years before AE 200, meaning that the First Century Interstellar Era roughly corresponds to the Third Century Atomic Era. An almost two-century offset.

Adding two centuries, the Tenth Century of the Interstellar Era therefore generally equates to the Twelfth Century of the Atomic Era. And in the Twelfth Century AE, it is the Second Terran Federation which is in dissolution, not the First Galactic Empire. This corrects the mistake. Specifically, the Tenth

Century of the Interstellar Era would run from AE 1092 to 1191. This is right at the end of the Second Federation, which Beam says “completely vanished by 1100 A.E.”¹⁰⁸ Seen in this light, it suggests that the space-pirates are not only there during the Federation’s dissolution, they’re there right before its final end, and even operate for many years after; plundering the five hundred worlds of a fallen civilization.¹⁰⁹

Thus, the Nostradamus model explains the mistakes in these ‘two’ statements by Chalmers, which are corrected by ‘adding two centuries’, and one of which discusses the ‘end’ of the Federation. They parallel the two additional *Centuries* that Nostradamus tacked onto the end of his prophecies, which are ‘mistakes’; they ruin the originally perfect 10 century/1000 quatrain design, and in addition can’t be called proper *Centuries*, as they consist of fragmentary and almost totally discontinuous verses. With only 2 quatrains remaining in Century XI, and 11 of Century XII, they are a mere 2% and 11% of full *Centuries*.

In story order, Chalmers foresees the space-pirates first, which refers to the end of the Federation; and then the Uller Uprising, which refers to its middle. It is therefore not surprising that, two pages later, the professor mentions his foreknowledge of its beginning; “the formation of the Terran Federation”, and it is referred to again after that.¹¹⁰ Combined with the deliberate errors, this deliberate reversal in the order of events was a great way for the subtle Beam to obscure his meaning. But now, by correcting the mistakes and placing them in the proper chronological order, we realize that Piper’s Nostradamus foresees the beginning of the Federation (presumably in early 1974, or AE 31), its middle five centuries later (the Uller Uprising, AE 526) and its end five centuries after that (the space-pirates, circa AE 1092). These parallel the beginning of Nostradamus’ prophecies (Century I), their middle (Centuries V-VI) and end (Century X). And this in turn explains why Beam had Ed use Interstellar Era dating for the space-pirate reference, rather than Atomic Era dating as in the Uller Uprising reference. Because the Tenth Century of the Interstellar Era is the last century in which the Federation exists, just as Century X, or the ‘tenth Century’ of Nostradamus is the final full Century of his prophecies.¹¹¹

Looking into the farther future from the vantage point of these parallel ‘tenth centuries’, the 13 quatrains which survive of Centuries XI and XII would then parallel the 16 or so civilized planets which survive through the Eleventh and Twelfth Centuries AE (the Interstellar Wars), following the Federation’s fall. For by the time of *Space Viking*, “There aren’t a dozen and a half planets in the Old Federation that still have hyperdrive, and they’re all civilized.”¹¹² This means that at most, there are 17 civilized planets, or 16 if we leave out Gilgamesh. Professor Chalmers’ foreknowledge therefore includes a “general outline” of the Federation’s thousand-year history, plus its aftermath; which parallels Nostradamus’ slightly more than a thousand prophecies (1000 original quatrains plus a few extra).

By my count, there are well over twenty parallels between Professor Chalmers and Nostradamus. This is far too many for coincidence. Because in “The Edge of the Knife”, it only takes “a ten-point coincidence” for Leonard Fitch to be convinced that Chalmers actually did foresee the assassination of Khalid ib’n Hussein. He says, “If that’s a simple and plausible coincidence, so’s dealing ten royal flushes in succession in a poker game. Tom, you figured that out; what did you say the odds against it were?”¹¹³ The probability of ten royal flushes in a row is 0.025194^{10} , or 0.00000000025914.¹¹⁴ In other words, there is a 99.99999999974806 percent chance that Chalmers’ ten-point precognition about Khalid is *not* a simple and plausible coincidence. With more than twenty parallels between Ed and Michel, the probability that these are not coincidences should therefore be twice as close to 100%. Making it almost a certainty that Piper modeled Professor Chalmers on Nostradamus.

But wait, you say, despite all of these parallels and percentages, Nostradamus’ law-breaking almanac of 1562 clearly shows that he wasn’t alive in 1630, as required by the AE 1 = 1601 AD equation, and his lifespan was actually 1503-1566! That is true, but Piper accounted for this discrepancy through Professor Pottgeiter. “I know, medieval history is full of stories about prophecies being fulfilled...And of course, *he’s about a century late for me, but there was Nostradamus*. Maybe those old prophecies weren’t just *ex post facto* legends, after all. Yes. After Khalid, I’ll believe that.”¹¹⁵ Well, I believe it too, because unlike the murky quatrains of Nostradamus, which can be (and have been) interpreted any number of ways, the prophecies of Ed Chalmers are clearly stated and do come true. They are historical facts, known before they occur.

Thus, Beam’s version of Nostradamus, Professor Chalmers, appears in the Future History “about a century late”. This is important for several reasons. First, Nostradamus’ lifespan of 1503-1566 means that in an exact parallel, Piper should have placed Chalmers roughly a hundred years earlier. Given that

AE 1 = 1601 AD, then 1503-1566 would equate to the years 97-34 of the pre-Atomic Era. This range is mostly in the Nineteenth Century, and would have the obvious result of excluding Ed from Beam's 'Future' History altogether. Second, bringing his version of Nostradamus a century forward therefore allowed Beam to place Chalmers near the beginning of his Future History (and conveniently in the near future of his readers), from where the professor could foresee a great deal of it.

The third reason, as stated earlier, is because his Future History begins in the First Century of the Atomic Era. Nostradamus began his prophecies with Century I, and the precognitions of Piper's Nostradamus begin in the First Century, or 'Century 1', AE. Fourth, if we add a century to Nostradamus' lifespan, it becomes 1603-1666, the midpoint of which is 1634-1635. This is just a few years after 1631, which as we've shown is paralleled by AE 31, the year of the Thirty Days' War. Professor Chalmers receives extensive foreknowledge about this conflict in "The Edge of the Knife"; another parallel with Nostradamus, some of whose quatrains are believed to refer to a Third World War.

And fifth, moving Nostradamus' lifespan forward so that it aligns with Chalmers' late appearance means that if Michel himself were about a century late (1603-1666), he would have lived before, during, and after the Thirty Years War (1618-1648); just as Ed lives before, during, and after the Thirty Days' War (which Beam modeled on the Thirty Years War, as will be discussed in the next section).

A few last points of interest. As we've seen, the real name of Nostradamus was Michel de Nostredame. Piper may have derived the name of his professor directly from the historical model. For all the letters in 'Ed Chalmers' are found in 'Michel de Nostredame'. In fact, 'Ed' reversed is at its heart, suggesting that Beam simply reversed the 'de' to get his character's first name. If we flip the syllables of his first name as well, 'Michel de' becomes 'Ed Chelmi', and we're practically there. Next, we reverse the s-r-e-a in Nostredame to make a-e-r-s. In this way, 'Chelmi' becomes 'ChAlmERS'.

And by rearranging all the letters to 'Michel de Nostredame', they become 'Ed Chalmers Notideme'. The 'Notideme' (or the original Nostredame) could have suggested making Ed a professor at the University of Notre Dame. A sensible idea since, like Chalmers, Nostradamus was once a professor; in his case, at the University of Montpelier.¹¹⁶ But that would be too obvious a clue for the subtle Beam, whom I deduce consciously changed 'Notideme' to 'Blanley College' in order to obscure the trail.

A college is inferior in status to a university. Universities usually contain many colleges, such as a College of Arts and Sciences, a College of Medicine, a College of Business, and so on. Piper therefore appears to have 'demoted' Chalmers in comparison with Nostradamus; but it could mean that he did so in order for Ed to achieve a loftier rank after WWIII. There will presumably be a great need for qualified professors, due to many of America's major cities being hit by H-bombs, which probably results in many important universities being destroyed, and many faculty members slain. And the fact that Nostradamus spent a year on the faculty of the University of Montpelier¹¹⁷ suggests that Beam's erstwhile college professor will become, at least for a short time, a university professor after the Thirty Days' War.

In addition, the enduring fame of Nostradamus over the last five centuries means that Chalmers, "an obscure professor of modern history",¹¹⁸ may actually achieve something which has a lasting impact in following centuries of the Future History. Although he is not mentioned in Beam's later stories, we recall that Ed refers to a book about the System States Alliance, which will be published sometime after that war. And this connects him to *The Cosmic Computer*, which also takes place after the System States War. In that novel, the Cosmic Computer, Merlin, is rediscovered after having been lost for forty years. Merlin is "capable of predicting future events," and can "handle [predict] large-group behavior with absolute accuracy."¹¹⁹ Very similar to Ed Chalmers, who foreknows many future events, and who predicted Khalid's murder "with uncanny accuracy".

Nor is that all. For just as Chalmers foresees the end of the Federation, Merlin predicts its coming end as well. According to General Shanlee, Merlin's postwar calculations revealed that "a trifle over two hundred years from now...the Terran Federation would no longer exist", and "In two hundred years, there won't be any Terran Federation."¹²⁰ Thus, the two additional Centuries of Nostradamus are once again involved. Because *The Cosmic Computer* ends in AE 896, and by 'adding two centuries' we come to AE 1096 and the end of the Federation; just as adding two centuries to the space-pirates in "The Edge of the Knife" revealed their connection to the Federation's end, in the years between AE 1092 and 1100.

There is much more in my 2009 paper, "Professor Chalmers—Piper's Nostradamus". Some of which is included in section f, The Future of Professor Chalmers.

ENDNOTES

1. The First Key

1. H. Beam Piper, *Empire* (New York, NY: Ace Books, 1981), p. 30
2. H. Beam Piper, *Uller Uprising* (New York, NY: Ace Books, 1983), p. 169
3. Ibid., p. 150
4. John F. Carr, *H. Beam Piper: A Biography* (Jefferson, NC: McFarland & Company, 2008), p. 212
5. H. Beam Piper, *Four-Day Planet/Lone Star Planet* (New York, NY: Ace Books, 1961), p. 193; John F. Carr, Introduction to *Federation* (New York, NY: Ace Books, 1981), p. xxix; and Piper, *Empire*, p. 28
6. https://en.wikipedia.org/wiki/Historiography_of_the_British_Empire
7. Jerry Pournelle, Preface: Piper's Foundation, *Federation*, p. vii
8. Dr. Christopher Bayly, general editor, *Atlas of the British Empire* (London, England: The Hamlyn Publishing Group, 1989), pp. 65, 66
9. H. Beam Piper, *Space Viking* (New York, NY: Ace Books, 1963), p. 13
10. Ibid., p. 32
11. https://en.wikipedia.org/wiki/Historiography_of_the_British_Empire
12. Carr, *Piper Biography*, p. 212

13. Ibid. “The Future History” places *Four-Day Planet* in the “Mid-IV Century”. This is incorrect, as internal evidence indicates the story occurs in the late Fifth Century (circa AE 495), meaning that when Beam wrote the summary, he was wrong about his own Future History by about a century and a half! Even if we grant that he was simply confused about the century in which *Four-Day Planet* occurs (his “Mid-IV Century” possibly intended to mean ‘mid-400s AE’ rather than mid-300s), he was still almost a half century off.

The second major error is Beam’s “About 1450 A.E.” date for when Sword-World ships first enter the Old Federation. Because in *Space Viking*, Lucas Trask says that the current date is roughly “eight centuries” after the System States War. (Piper, *Space Viking*, p. 10) The war ended in AE 854, and 854 plus 800 equals AE 1654. “The Future History” puts it a bit later, in the “Early XVIII Century”, or a little after AE 1700. (Carr, *Piper Biography*, p. 213) That’s all right, since Trask was referring to how long it took the Sword-Worlds to reach a population of 3.5 billion, so it could easily be a bit later than AE 1654. But then Lucas says it’s been “three hundred and fifty years” since Sword-World ships entered Federation space. (Piper, *Space Viking*, p. 10) And AE 1700 minus 350 equals AE 1350, not 1450! So in this case, Piper was unquestionably off by a full century.

The other errors are admittedly minor. The date for the first moon landing is given as AE 27, or 1970. But in “The Edge of the Knife”, Professor Chalmers says that the first unmanned rocket to Luna “would be launched some time in 1971”, making the correct date AE 28. (Piper, *Empire*, p. 22) Similarly, “The Future History” says that WWII occurs in AE 32, or 1975; but in “Edge”, Chalmers twice mentions that the current year is 1973, and the Third World War will happen in the next year, or 1974 (AE 31). (ibid., pp. 13, 17, 36, 55)

2. List of Piper's Future Events and their Historical Models

14. Piper, *Empire*, p. 59
15. Carr, *Piper Biography*, p. 212
16. Edward S. Creasy, *Fifteen Decisive Battles of the World* (1851), sourced from <https://www.gutenberg.org/files/4061/4061-h/4061-h.htm#link2HCH0011>

17. Carr, *Piper Biography*, p. 212
18. https://en.wikipedia.org/wiki/Queen_Anne's_War
19. Colin McEvedy, *The Penguin Atlas of North American History* (London, England: Penguin Books, 1988), p. 50
20. Carr, *Piper Biography*, p. 212
21. Ibid.
22. Piper, *Empire*, p. 21
23. https://en.wikipedia.org/wiki/Acts_of_Union_1707
24. Piper, *Uller Uprising*, p. 64
25. Ibid., p. 169
26. https://en.wikipedia.org/wiki/John_Churchill,_1st_Duke_of_Marlborough
27. Piper, *Empire*, p. 47
28. Carr, *Piper Biography*, p. 213
29. Ibid.
30. https://en.wikipedia.org/wiki/Historiography_of_the_British_Empire
31. Piper, *Federation*, p. 275
32. H. Beam Piper, *Little Fuzzy* (New York, NY: Ace Books, 1962), p. 36
33. Piper, *Four-Day/Lone Star*, p. 269
34. Piper, *Empire*, p. 28

3. Overview of Piper's Future Events and their Historical Models

a) AE 31-183 = 1631-1783 AD. The First Terran Federation parallels the First British Empire.

35. https://en.wikipedia.org/wiki/Historiography_of_the_British_Empire
36. McEvedy, *North American History*, p. 38
37. Piper, *Empire*, p. 48
38. Ibid., p. 47

b) AE 3-22 = 1603-1622 AD. From “Free Companies” (Italian Condottiere) to Free Scientists.

39. H. Beam Piper, *The Worlds of H. Beam Piper* (New York, NY: Ace Books, 1983), p. 34
40. <https://en.wikipedia.org/wiki/Condottiere>
41. Ibid.
42. Piper, *Worlds*, pp. 30, 32, 36
43. Examples include the “[Fall of Antwerp](#)” (1558) – [Alexander Farnese](#) for Catholic Spain against Dutch protestants and England”, the “[Siege of Paris](#)” (1590) – [Alexander Farnese](#) for the Catholic League against Royal France,

England and the [Protestant] Huguenots", and the "[Palatinate campaign](#) (1620-1622) – [Ambroglio Spinola](#) for Spain and [the] HRE against [the] [Electorate of Palatinate](#)". (<https://en.wikipedia.org/wiki/Condottiere>)

44. Piper, *Worlds*, p. 54

45. Ibid., pp. 30, 31, 32, 39

46. Ibid., p. 50

47. Ibid., pp. 36, 41, 42

48. Ibid., pp. 40, 50

49. Ibid., pp. 44-48

50. <https://en.wikipedia.org/wiki/Condottiere>

51. H. Beam Piper, *Lord Kalvan of Otherwhen* (New York, NY: Ace Books, 1965), pp. 160-161

52. Piper, *Worlds*, pp. 35, 48

53. Ibid., pp. 30, 41, 42 This element of the story apparently comes from the Manhattan Project, some of whose scientists were suspected of being Communists (including Robert Oppenheimer, the lead scientist) or turned out to be Soviet spies (Klaus Fuchs, David Greenglass and Theodore Hall).

54. Ibid., pp. 36, 53, 55

55. There's another possible scenario for the Free Scientists. The *condottiere* appeared a couple of centuries prior to 1492, the iconic year when European civilization began expanding to the New World. Piper may therefore have been drawing a similar parallel, by having his Free Scientists appear a couple of decades (rather than centuries) before Terran civilization begins expanding to Luna and the other 'new worlds' of the Solar System. His intention might then have roughly been "1992 AD parallels 1492 AD". The initial voyages to the Moon in the 1970s and 1980s would then parallel the initial Portuguese and Spanish expeditions to nearby islands such as Madeira (1418), the Azores (1438) and the Canaries (not fully conquered until the 1490s); while the subsequent European expeditions to the much greater landmasses of the Americas (1490s, early 1500s) are paralleled by the subsequent Terran expeditions to the 'greater' celestial bodies of Mars and Venus (1990s, early 2000s).

In that case, the Free Scientists would last for two centuries rather than one. Condottiere leaders from circa 1480 to 1680 would be paralleled by Team leaders from circa AE 3 to 203; or 1946 to 2146. In the Future History, the Secession of Venus occurs in 2117 (AE 174). If this event is paralleled in "The Mercenaries" timeline, then Free Scientists could be involved. Because as we've seen, Piper modeled the Secession of Venus on the American Revolution, and the presence of Free Scientists would then parallel the Hessians, or German mercenaries, who fought for the British against the American rebels.

56. <https://en.wikipedia.org/wiki/Condottiere>

c) AE 28 = 1628 AD. The Rocky Moon parallels Plymouth Rock.

57. <https://ancestralfindings.com/mayflower-pioneers-hardships-encountered/>, and <https://www.historynet.com/life-hard-pilgrims.htm>

58. Piper, *Empire*, p. 56

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

60. Piper, *Worlds*, p. 54

61. In "Omnilingual", which takes place in 1996, the spaceship *Cyrano* has an international crew, with named members including many Anglo-Americans, a French-Canadian, a Japanese, a Turco-German, a German, an Anglo-Russian and an Hispanic. And that's only seventeen members out of "fifty-odd men and women". (Piper, *Federation*, p. 34) The other thirty-five or so are probably a similar mix of various nationalities, with an Anglo-American majority.

In addition to the international crew, the reporters on board represent the Trans-Space News Service and the Pan-Federation Telecast System. (ibid., pp. 4, 19) Not national news services such as the BBC or NBC. The chief archaeologist, Selim von Ohlhorst, was selected by "The Federation Government", and Tony Lattimer mentions bringing their discoveries to the attention of "the [Terran] public, and to the universities and the learned societies, and to the Federation Government." (ibid., pp. 20-21, 46) Bringing them to the attention of *national* governments isn't on the list; not even that of the United States, founder and leading member of the Terran Federation.

It should also be noted that almost half of the named personnel (7 out of 17) are given military rank. "Colonel Hubert Penrose [is] the Space Force CO" and seems to be in command of the others. Though not made explicit, this is almost certainly the Terran Federation Space Force. Because Lieutenant Sachiko Koremitsu is from Japan, and mentions "picture language-books, the sort we use in the Service", where the pictures "explain their captions". (Piper, *Federation*, pp. 4, 12) The Federation military probably uses these books because it has to integrate soldiers from many different nationalities, speaking different languages. A unified yet international expedition is also indicated by the names of the ships; the *Cyrano* is named for a Frenchman and the *Schiaparelli* for an Italian.

This suggests that after WWIII, the Federation does indeed become "some kind of a world empire" (Piper, *Empire*, p. 47). Unlike the United Nations, it encompasses the whole world; in fact, two worlds, Terra and Luna. And unlike the old UN Security Council, which was subject to the whims of its national members, the Federation Government is superior to those of its member states. Another change, and a critical one, is that the Federation has its own military to enforce its global authority.

62. H. Beam Piper and John J. McGuire, *Crisis in 2140* (New York, NY: Ace Books, 1957), p. 9 *Crisis* takes place after the Fourth World War, not the Third. But since the Northern Hemisphere is still fully civilized, it seems to make a good parallel with post-WWIII Terra in the THFH. Russia has free elections in the story, and though these are somewhat chaotic, that's just what one would expect in a new democracy. "The results of last week's election in Russia are being challenged by twelve of the fourteen parties represented on the ballot; the only parties not hurling accusations of fraud are the Democrats, who won, and the Christian Communists, who are about as influential in Russian politics as the Vegetarian Anti-Vaccination Party is here..."

d) AE 30 = 1630 AD. Professor Chalmers—Piper's Nostradamus.

63. Piper, *Empire*, p. 27

64. Henry C. Roberts, *The Complete Prophecies of Nostradamus* (Oyster Bay, NY: Nostradamus Co., 1982), pp. 20, 60, 299 The prophecy about King Henry is found in Century I Quatrain 35, that of the Great Fire in Century II Quatrain 51, and that about the Lunar landing in Century IX Quatrain 65.

65. Ibid., p. 147

66. Piper, *Empire*, pp. 13, 22, 48, 52 Chalmers says that Northern State Mental Hospital is "in the one part of the state completely untouched by the H-bombs of the Thirty Days' War". This implies that California's major cities, including San Francisco and Los Angeles, and probably San Diego, are H-bombed.

67. By my count, Roberts attributes nine quatrains to WWI. These are Century I, Quatrains 3, 7, and 14; Century IV, Quatrains 8 and 12; Century V, Quatrain 26; Century VIII, Quatrains 61 and 94; and Century X, Quatrain 92. (Roberts, *Complete Prophecies*, pp. 10, 11, 13, 113, 115, 153, 262, 273, 342)

Also by my count, Roberts attributes over a full *Century* of quatrains to World War II. These include the rise of Benito Mussolini and Adolf Hitler (I, 12; III, 35), the Rome-Berlin Axis (IX, 3), the Anschluss of Austria to Germany (I, 82), the Munich Pact with Chamberlain (VI, 90), the Hitler-Stalin Non-Aggression Pact (II, 38), the failure and dissolution of the League of Nations (V, 85; also XII, 65), the German annexation of Holland and Belgium (V, 94), the Fall of France (VII, 34-5), the London Blitz and Operation Sea Lion (II, 70, 78), the Siege of Leningrad (I, 41), the liberation of Ethiopia from Italy (I, 9), Pearl Harbor (I, 92; III, 1), the US invasion of North Africa (V, 69), the liberation of Italy and fall of Mussolini (V, 99; III, 63), the D-Day invasion (I, 29; II, 1, 18, 19; IV, 48), the Final Solution (I, 59; IV, 56), the attempted assassination of Hitler, Operation Valkyrie (V, 29), Hitler's later suicide (V, 5), the Nuremberg Trials (I, 24; V, 100; VI, 15), the aforementioned atomic bombings of Hiroshima and Nagasaki (V, 8; possibly also II, 91-92), and the postwar formation of the United Nations (I, 97). (ibid., pp. 13, 88, 279, 36, 209, 55, 173, 350, 176, 225, 66, 69, 22, 12, 39, 77, 168, 178, 98, 18, 43, 49, 127, 28, 129, 154, 146, 17, 178, 184, 147, 73, 41)

And again by my count, Roberts attributes fifteen quatrains to World War Three. These are Century I, Quatrains 16-18, 87, and 91; Century II, Quatrains 29, 30, 39, 40, and 62; Century III, Quatrain 7; Century V, Quatrain 55; Century VI, Quatrains 21 and 24; and Century VII, Quatrain 7. (ibid., pp. 14-15, 38-39, 52-53, 56, 63, 79, 163, 186-187, 216)

68. Ibid., pp. 13, 17, 22, 28, 30, 36, 47, 48, 52, 55, 56, 57, 58
69. Ibid., p. 21; and Carr, *Piper Biography*, p. 212
70. Roberts, *Complete Prophecies*, pp. 136, 202, 240
71. Piper, *Empire*, pp. 21-22, 47
72. Roberts, *Complete Prophecies*, pp. 12, 30, 31, 35, 46, 170, 186, 303, 321 (ten quatrains); and Piper, *Empire*, pp. 53, 57
73. Roberts, *Complete Prophecies*, p. 229; and Piper, *Empire*, p. 16
74. Roberts, *Complete Prophecies*, p. 171
75. Piper, *Empire*, p. 16 Since AE 1 equals 1943, then AE 800 equals the year 2743. This is almost the middle of the Twenty-Eighth Century, which runs from 2701-2800 AD. The last year of the 28th Century (2800 AD) would then equate to AE 857. This means that Franchard's book is published no more than three years after the System States War ends.
76. <https://en.wikipedia.org/wiki/Communards>
77. Roberts, *Complete Prophecies*, p. 20; and https://en.wikipedia.org/wiki/Henry_II_of_France. The latter reference states that "Nostradamus...is said by most commentators to have become famous when one of his quatrains was construed as a prediction of the death of King Henry II". And according to Orson Welles in "The Man Who Saw Tomorrow", this quatrain "was quickly seized upon as suggesting that the reigning King of France, Henry the Second, would die in a jousting tournament. Nostradamus was quickly summoned before the king to explain the quatrain; the king said it was ridiculous, he would never participate in such a tournament. Nostradamus could only reply that he wrote what he saw." (This is about 13 minutes into Part One of the DVD.)
78. Piper, *Empire*, pp. 31, 33, 37, 38
79. Roberts, *Complete Prophecies*, p. xvi
80. Piper, *Empire*, pp. 18, 19, 20
81. Ibid., pp. 39, 41, 42
82. Ibid., pp. 13-15, 33, 34, 37-39, 45, 47, 48, 49, 56, 59
83. <http://en.wikipedia.org/wiki/Nostradamus>
84. Ibid., sourced from Lemesurier, *The Unknown Nostradamus*
85. Ibid.
86. Roberts, *Complete Prophecies*, pp. 17, 283
87. <https://en.wikipedia.org/wiki/Nostradamus>
88. Carr, *Federation* Introduction, p. xxii
89. Piper, *Empire*, pp. 44, 51 Chalmers muses that "the [CIA] major in mufti was probably worrying about the consequences to military security of having a prophet at large", and Stanley Weill warns Ed that "If [Cutler] thinks you know something you are not supposed to, a mental hospital may be his idea of a good place to put you away." That may seem plausible, but think it through. Here's a guy who, with possibly clairvoyant powers, has learned top American secrets such as the existence of the Terran Federation. *What if he can (or has) used those powers to learn Soviet top secrets, too?* Do you commit a man like that to a mental hospital, or do you take him to a secure facility for questioning and testing? Or better yet, have him declared insane and commit him to a hospital as a cover story, then spirit him away for questioning and testing.

The possibility of gaining a huge advantage over America's main enemy in a nuclear hair-trigger world would seem a much better use of Chalmers' potential abilities than simply stuffing him away in an insane asylum. Thus, it is much more likely that being vindicated by Dr. Hauserman would end with Ed being 'recruited' (detained) by the CIA or other government agency, and placed under permanent guard in a secret facility for the rest of his life. Mainly to protect this very important asset for the United States, but also to keep him from being kidnapped and used against America by the Eastern Axis—or anyone else, for that matter.

90. <https://en.wikipedia.org/wiki/Nostradamus>

91. Piper, *Empire*, pp. 57, 58

92. Ibid., pp. 56, 57 Personal safety cannot be Ed's only reason for maneuvering Dr. Hauserman into committing him to Northern State. Since he knows that WWIII will begin "before autumn" of 1974 (ibid., p. 55), he could simply resign his position and move away from Blanley; either at the end of the school year (April 1974), or during the summer. By having himself declared insane, however, everyone will leave him alone, and his current troubles will be over. The press will move on to the next news story, Dean Whitburn will be convinced that he was right about Chalmers all along, the trustees and Ed's fellow professors will be satisfied that the Higher Education Faculty Tenure Act of 1963 has been upheld, Leonard Fitch and the psychology-parapsychology crowd will think they were wrong about Ed's precognitive gift, and the CIA will have no further interest in him.

93. <https://en.wikipedia.org/wiki/Nostradamus>

94. Piper, *Empire*, pp. 15, 22, 53, emphases added

95. Ibid., p. 57

96. Roberts, *Complete Prophecies*, pp. 57, 93

97. Ibid., p. xv

98. Piper, *Empire*, p. 16

99. Ibid., p. 17; and <https://en.wikipedia.org/wiki/Nostradamus>

100. Piper, *Empire*, p. 21; and Roberts, *Complete Prophecies*, p. 6 Although the 3797 date is one of the few provided by Nostradamus, it does not appear in a quatrain, but rather in a letter to his son Caesar.

101. Roberts, *Complete Prophecies*, p. 25 Though the dates don't seem to line up right, this apparently refers to "the seventh millenary" since the Creation of the world circa 4000 BC. (ibid., pp. 237, 238, 239)

102. Piper, *Empire*, p. 28

103. Carr, *Piper Biography*, p. 213 The Sixth Century date is confirmed by the character of Kent Pickering in *First Cycle*. Kent visits the Elektran system in 572 PD (Primary Dispersion, an alternate version of Atomic Era), and mentions being on the gun-cutter with Carlos von Schlichten when Keegark was atom-bombed during the Uprising. (H. Beam Piper, *First Cycle* (New York, NY: Ace Books, 1982), pp. 4, 199)

104. Roberts, *Complete Prophecies*, p. 231

105. Ibid., pp. 346-350

106. Piper, *Empire*, p. 28

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

108. Ibid. Since the Terran Federation ends just before the end of the Eleventh Century AE, my date would be AE 1097. This is based on the fact that, in Century XI of Nostradamus, the last surviving quatrain is number 97. And this date is in agreement with a reference in *The Cosmic Computer*; see endnote 120.

109. Indeed, given the much greater number of planets in the Terran Federation than in the Sword-Worlds (500

compared to 12), there may be a great many more space-pirate vessels operating at its end than Space Viking ships raiding in Old Federation space centuries later. Otto Harkaman says that "At present, I'd say there are at least two hundred Space Viking ships in operation." (Piper, *Space Viking*, p. 33) Doing a little arithmetic, 200 ships originating from 12 worlds would equal 8,333 space-pirate ships originating from 500 planets.

That is probably an excessive total, since not all Federation planets will send out space-pirates to raid other worlds. But even if we reduce it by 90%, there would still be 833 space-pirate vessels operating in Federation space; four times as many as Space Vikings operating centuries later. And this disparity would highlight the relative decline between the two eras, as there is undoubtedly much more plunder available when the Federation is falling apart than centuries later, after the Interstellar Wars have reduced civilization to its lowest ebb.

110. Piper, *Empire*, pp. 30, 48

111. Piper also appears to have used these deliberate errors to illustrate Chalmers' confused state of mind at this point of the story. First, Ed fails to find his future history note on the *Kilroy*, which he was sure he'd written down. This forces him to face the possibility that his attorney Stanley Weill and Dean Whitburn are right; he doesn't have a psychic ability, he's suffering from a "delusion". Chalmers then vacillates "between conviction of the reality of his future knowledge and resolution to have no more to do with it", and suppresses more information about the Thirty Days' War which comes to him. On two occasions he even decides "to destroy all the notes he had made" about the future, though he fails to actually do so. After that Ed tries, "not always successfully, to avoid drifting into "memories" of the future". He has more and more trouble sleeping, and attempts to compensate by drinking more and more heavily. And he neglects reading the newspapers. By the end of this month-long period (mid-October to mid-November 1973), Chalmers is "tired and unrefreshed" and "edgy from the strain". Indeed, he has become so detached from the real world that he thinks it's "mid-April, 1973", rather than mid-November. (*ibid.*, pp. 27, 28, 29) Ed's memories of the future have likewise become confused, which provides an 'internal' story reason for his mistakes in the Uller Uprising and space-pirate references.

112. Piper, *Space Viking*, p. 12 The Interstellar Wars last "from the Eleventh to the Thirteenth Centuries" (*ibid.*) The 'to' clearly implies that they begin in the Eleventh Century AE, and are finished by the end of the Twelfth Century.

113. Piper, *Empire*, p. 45

114. <https://wizardofodds.com/games/poker>

115. Piper, *Empire*, p. 59, first emphasis added

116. Like the University of Montpellier in France, Notre Dame is in origin a 'French' university, and its deduced connection to Prof. Edward Chalmers is supported by that school's establishment by an 'Edward'. "The University of Notre Dame was founded in November 1842 by Rev. Edward F. Sorin, C.S.C., a priest of the Congregation of Holy Cross, a French missionary order." (<https://www.nd.edu/about/>) The Reverend Sorin suggests another possible origin for how Piper derived Chalmers' first name.

117. Roberts, *Complete Prophecies*, p. xv

118. Piper, *Empire*, p. 30

119. H. Beam Piper, *The Cosmic Computer* (New York, NY: Ace Books, 1983), pp. 16, 227

120. *Ibid.*, p. 226 "[A] trifle over two hundred years from" AE 896 would be AE 1097 or 1098. And the 1097 date would agree with my deduction from the Nostradamus model that the Federation ends in that year. See endnote 108.

