

**Groovy Science : Knowledge, Innovation, and American
Counterculture**

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The Unseasonable Grooviness of Immanuel Velikovsky

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To everything there is a season, as the classic counter-cultural song by the Byrds (and also, of course, Ecclesiastes) has it. Certainly, Immanuel Velikovsky (1895–1979) never imagined that the late 1960s and early 1970s were going to be his. For almost two decades, Velikovsky's extraordinary claims about the recent history of the solar system and its influence on the ancient history of humanity had lain in quarantine, isolated by the Establishment scientists whose approval he so desperately sought. Mainstream science would have nothing to do with him, but in the late 1960s the counterculture offered Velikovsky acceptance, even a reverence unusual for this iconoclastic cohort. In 1971 Murray Gell-Mann, who had received the Nobel Prize in Physics two years earlier, viewed the burgeoning movement with alarm: "We are seeing among educated people a resurgence of superstition, extraordinary interest in astrology, palmistry and Velikovsky; there is a surge of rejection of rationality, going far beyond natural science and engineering."¹ Velikovsky in post-1968 America was no longer "fringe": he was one of the most popular authors read by college youth.

It was Velikovsky's moment, and a most unlikely moment at that. Born in 1895 in Virebsk—now in Belarus

but then a thriving Jewish metropolis within the Russian Empire—he came to intellectual maturity in emigration first in Berlin and then in Palestine, nourished on two major cultural trends within contemporary Judaism: Zionism and Freudianism. He was, in short, a child of interwar intellectuality, not of flowers and communes. Seen from the perspective of his conceptual formation, the 1970s were an improbable setting for his moment in the limelight.

He achieved this new status largely because of a book, itself a relic of another time—in this case postwar anxieties about anti-Communism and the status of science. In April 1950 the Macmillan Company released Velikovsky's first English-language book, entitled *Worlds in Collision*, which proceeded to rocket to the top of nonfiction best-seller lists nationwide. In this blockbuster, Velikovsky argued that ancient mythological, scriptural, and historical sources from a variety of cultures—but principally from the Near East, and especially the Hebrew Bible—contained repeated homologous descriptions of major catastrophes: rains of fire, immense earthquakes, tsunamis, dragons and snakes fighting in the heavens. These passages had long been interpreted by rationalist readers as metaphors or ecstatic visions. Not so, argued Velikovsky: when compared and synchronized, they pointed toward a massive global catastrophe (more accurately, a series of catastrophes) that actually happened. Velikovsky tracked two main cataclysms: one that occurred around 1500 BC, during the Exodus of the Hebrews from Egypt; and another in the eighth century BC, which changed the length of the year from 360 days to its current 365¼ days, stunning the prophet Isaiah and chronicled as the battle between Athena and Ares in Homer's *Iliad*.²

Worlds in Collision ignited a firestorm of criticism from scientists, who attacked the book in reviews across the popular press. At its core was Velikovsky's mechanism for these catastrophes. He claimed that the first was caused by a comet that had been ejected from Jupiter and almost collided with Earth, remaining trapped in gravitational and electromagnetic interaction with Earth for several decades, raining petroleum from its tail, flaring across the heavens, and tilting Earth's axis. (The last caused the sun to appear to stand still over the plains of Gibeon in Joshua's famous battle.) Eventually, the comet stabilized into the planet Venus. Thus, Earth's nearest planetary neighbor was originally a comet born in historical times, as attested by proper interpretation of the records of the collective memory of humanity. Venus's movements then displaced Mars, which threatened Earth in the second series of catastrophes. Velikovsky's arguments presupposed a reformulation

of the central precepts of geology, paleontology, archeology, and celestial mechanics, not to mention ancient history.

A small number of scientists, principally astronomers, wrote to Macmillan—then the nation's most prestigious scientific publisher, earning most of its revenues from textbook sales—and threatened a boycott of Macmillan texts unless Velikovsky's book was dumped. George Brett, the director of the press, arranged for the contract to be transferred to Doubleday, a trade press that had no Achilles heel in the form of a textbook division, and Velikovsky continued to publish with the latter until his death.³ The public exposure of this fledgling boycott generated among Velikovsky's supporters (few as they then were) a rhetoric centered on Galileo against the church, a variant of David against Goliath: Velikovsky spoke alone against the powers that be, a voice of reason against hidebound dogmatism and privilege.

This is where we find Velikovsky in the early 1960s, a man doubly displaced beyond his season. The first displacement concerns the composition of *Worlds in Collision* itself. This book, which was the *succès de scandale* of 1950, was originally conceived as a riposte to the denigration of Judaism that Velikovsky perceived in Sigmund Freud's final work, *Moses and Monotheism* (1938).⁴ Leaving his home in Tel Aviv, he embarked on a research trip with his family to New York City in 1939 (it was permanently extended by the outbreak of war and then the vicissitudes of life) and began composing a manuscript entitled "Freud and His Heroes" to expose Freud's neuroses about his own Judaism in his dream theories, in his depiction of Oedipus, and finally in his scandalous argument that Moses was an Egyptian who gave the Jews the Pharaoh Akhenaton's (Akhmenaten) monotheism before being murdered by his own people. A sudden insight led Velikovsky to consider the ten plagues and the miracles of the Exodus to be natural phenomena, which eventually brought him to Venus and a trade-book contract for *Worlds in Collision*.⁵ The seeds were planted in the season of psychoanalytic debates and were harvested in Cold War America.

That was the second displacement. Velikovsky's book had originally been pitched by Macmillan as an intervention in long-standing worries about the conflict between science and religion. Here was a book—maybe not a serious scientific monograph, as five separate peer reviewers pointed out before blithely approving it—that used ancient sources, principally the Hebrew Bible, to make claims about the dynamics of planets. Although the advance publicity campaign for the book and endorsements by such public religious luminaries as Norman Vincent Peale situated the book in this context, the astronomers and other sci-

entists appropriated it within another contemporary debate: that over Joseph Stalin's imposition of Trofim Lysenko's antigenetic theories as obligatory orthodoxy in the Soviet Union and the simultaneous congressional persecution of left-leaning scientists in the United States.⁶ The attack on Velikovsky, surprising in its intensity, was a by-product of a moment when paranoia and anxiety about ideology's possibly fatal effect on scientific inquiry gripped the American scientific community. The Velikovsky affair was absorbed into 1950's "silly season," and it seemed that his moment was past.⁷

And then, almost despite himself, Velikovsky rose once more. Amid the tumults that rocked American culture in the late 1960s, a marked enthusiasm for cosmic catastrophism was shaken loose. Velikovsky became, as one of his critics put it in 1977, "the grand curmudgeon of anti-establishment science."⁸ For Harold Urey—winner of the 1934 Nobel Prize in Chemistry for his 1932 discovery of deuterium (a heavy isotope of hydrogen)—the potential reverberations of this sea change were no less catastrophic than a near collision with a comet. "Velikovsky is a most remarkable phenomenon of the last 20 years," he wrote in 1967 to University of Kansas chemist (and Velikovskian) Albert Burgstahler in answer to an earlier missive. "If someone of this kind should turn up in science once a year I think it would wreck science completely."⁹

The counterculture had found a scientific guru in a septuagenarian Russian-Israeli émigré. "The counterculture," of course, was not one thing but comprised a diverse array of peaceniks, New Age spiritual seekers, Black Power activists, the drug-addled, the musically hip, and those who just refused to keep on keeping on: "a culture so radically disaffiliated from the mainstream assumptions of our society that it scarcely looks to many as a culture at all, but takes on the alarming appearance of a barbaric intrusion."¹⁰ This characterization came from Theodore Roszak, the writer whose 1969 book, *The Making of a Counter Culture*, gave the phenomenon its name. But Roszak also imbued the counterculture with his own agenda: a critique of scientific and technical objectivity. Many scientists saw the excitement surrounding Velikovsky's theories as more evidence of the same: "It is as if many Velikovskiytes are saying 'Nyat! Science isn't so great—look at all the things it can't explain!' . . . Many Velikovskiytes, like many others who have no experience in research, betray a basic hostility to science per se."¹¹

This interpretation is misleading. There were many ways to be hostile to science in the 1970s—getting stoned instead of going to class, joining a radical farming commune, or bombing a computer center, for

instance—but it is not obvious that the detailed study of orbital paths, geological formations, ancient inscriptions, and the latest reports from Soviet Venus landers was among their number. Being interested in Velikovsky meant being interested *in* science, just science of a different sort. Rejected decisively by the Establishment, by the 1970s Immanuel Velikovsky had acquired, in a fit of absent-mindedness, a counter-Establishment: his books assigned in college courses, peer-reviewed journals dedicated to his theories, and countless invitations to address packed lecture halls.

This chapter uses the story of Velikovsky's final decade to trace two paths in the relationship between science and the counterculture. First, I will examine how the growing swath of Velikovsky fans perceived the scientific "Establishment," a fighting word. Scientists were feeling just as embattled as they had during the events that provoked the spasmodic reaction of 1950. The barbarians had come through the gates, they were sitting in classrooms, and they could vote. By 1972 Alvin Weinberg, director of the Oak Ridge National Laboratory, was deeply concerned: "Today, however, one wonders whether science can afford the loss in public confidence that the Velikovsky incident [of 1950] cost it. The republic of science can be destroyed more surely by withdrawal of public support for science than by intrusion of the public into its workings."¹² Mapping out precisely how both mainstream scientists and Velikovskians perceived the conflict between established doctrines and cosmic catastrophism thus delineates the fault lines between different conceptions of science.

If the first issue is *what* the several sides were fighting over, the second concern is *how* they did it. The countercultural Velikovskians were unable, by definition, to publish in mainstream venues like *Science* or *Astrophysical Journal*. To broadcast their arguments they had to use alternative modes of communication: special courses, lectures, student groups, and especially the emergence of specialized Velikovskian journals (principally *Pensée* and *Kronos*). The rise and fall of this alternative publishing forum shows us not only how alternative sciences were framed and promulgated but also what happened when Velikovsky's massive popularity among the youth began to strain his own self-conception of his ideas. Youth had appropriated him for its own reasons, not his, and Velikovsky neither liked nor trusted these camp followers of cosmic catastrophism. It is important to recall that in this age of gurus, the energy often emanated from the followers, not the charismatic leader. We will thus follow Velikovskianism more than Velikovsky, as his untimely season finally arrived.

Velikovsky 101

It was difficult to attend college in the 1970s without being somewhat aware of Immanuel Velikovsky and his revolutionary theories. The extent of his popularity is hard to measure, but there is no question that, when one tallies up the letters from fans across the country, the tremendous sales of his books (especially *Worlds in Collision*) in college bookstores, and the numerous invitations to lecture, Velikovsky was becoming something of a phenomenon—even, one might say, a celebrity. (Consider the fact that Peter Fonda, the easy-riding poster child of the counterculture, name-checked Velikovsky in an interview.)¹³

In retrospect, Velikovsky presented this transformation as the foreseen result of his own changed tactics: instead of diplomatic overtures to established scientists, he would focus on the young, who were less likely to be indoctrinated into uniformitarian dogma. Velikovsky declared in 1969 that a decade earlier “I evaluated my resources and concluded that I should not spread myself on all fronts but dedicate my efforts to the goal of reaching the young generation—college students and young professors.”¹⁴ Velikovsky was very concerned with youth, and he particularly enjoyed the contrast of his own aging frame with the boundless energy of his fans. Writing in the late 1970s, he gloried that “I, an octogenarian, stride with the young of mind. There is no cult of Velikovsky; there is only the cult of scientific and historical truth.”¹⁵

And so Velikovsky looked to the students; or rather, the students looked to him. He experimented with a campus organization, Cosmos and Chronos, established in the mid-1960s at Princeton University, less than a mile from his home. By 1967 the fledgling clubs received a four-page mimeographed newsletter from the Princeton chapter of the “Campus Study Groups in Interdisciplinary Synthesis.”¹⁶ These intermittently produced newsletters mentioned recent pro-Velikovsky publications, confirmations of scientific predictions, and his impressive roster of upcoming talks. Between 1964 and 1969, by his own count, he had lectured at sixty college campuses of all types, seeding Cosmos and Chronos Groups along the way. On 27 April 1966 Velikovsky gave a talk at Yale University entitled “The Pyramids”; on 24 January 1968 he gave a lecture, “A Changing View of the Universe,” at the Towne School of Civil and Mechanical Engineering at the University of Pennsylvania; and on 17 February 1972 he capped his tour of the Ivy League with “My Star Witnesses,” presented by invitation before the Society of Engineers and Scientists of Harvard University. Eminent about many things, Velikovsky was assiduously democratic when it came to speaking about

his theories. He accepted an invitation from the Forum for Free Speech at Swarthmore, and he did not shun San Fernando Valley State College or the University of North Texas. He even spoke at high schools.

“The new generation on campuses—in this country—is definitely following the heretic; the professors find themselves before unbelieving audiences,” Velikovsky crowed. “My visits to campuses are triumphs. And more recently some large universities re-evaluate the entire situation; thus I was selected to address the Honors Day Convocation (June 3 [1967]) at the Washington University, St. Louis, over a two-times Nobel Prize winner (Lynnus [sic] Pauling).”¹⁷ On 14 April 1970, in celebratory anticipation of the first Earth Day the following week, Velikovsky achieved top billing at the Parsons School of Design with the talk “Is the Earth an Optimal Place to Live?” Stewart Brand, the editor of the *Whole Earth Catalog* and fixture of the counterculture, played backup.¹⁸ The appeal spread northward. At McMaster University in Hamilton, Ontario, in 1974, Velikovsky drew a crowd of 1,100, and he received an honorary doctorate of arts and sciences in spring 1974 from the University of Lethbridge in Alberta, accompanied by a Velikovskian conference.¹⁹

The change was in the audience, not in Velikovsky: his claims remained almost identical to the position sketched out in 1950 in his best seller. Why were people lining up for him, and why *now*? His theories served as a middle ground for people of all political persuasions. He was an underdog in an age that had ceased to trust scientists (capturing the Left), but he also promoted deeper study of the Bible (seducing the Right) in a decade whose best-selling work was Hal Lindsey’s *Late Great Planet Earth* (1970), an application of biblical eschatology to Cold War geopolitics (to which I will return in the conclusion). Velikovsky was anti-Establishment but not New Left, and thus shared affinities with strands of the counterculture that have dimmed in our memory today.²⁰ To a speaker at the 1974 Lethbridge conference, Velikovsky was the choice of a new generation:

The veil of amnesia has been lifted, the result is the awakening of consciousness, whether the apocalyptic agent is perceived to be an extra-terrestrial jostling, or biospheric poisoning, atomic weaponry overkill, or overpopulation; or whether one has experienced the disintegration of his world view by chemical inducement—a magical mushroom or the fabled LSD. The generation of the *Whole Earth Catalogue* has experienced the catastrophe and, consistent with Dr. Velikovsky’s amnesia theory, they no

longer itch to re-enact the primordial paroxysm that heralded our present age—the bomb has gone off!²¹

This view fits nicely with Roszak's antitechnocracy interpretation of the youth movement and Gell-Mann's fears about a dawn of obscurantism. Surely this was part of his growing appeal: bringing up Velikovsky in class enraged science faculty. Yet explaining support of Velikovsky as expressing "anti-Establishment" sympathies is no explanation at all. In the 1970s *everyone* was opposed to the Establishment. As historian Bruce Schulman has observed: "Richard Nixon hated the establishment. He loathed the prep school and private club set, the opera-goers and intellectuals, the northeastern Ivy League elite."²² When the president of the United States can claim anti-Establishment credentials, we need a more nuanced framework. The point was not opposition to an Establishment but what the Establishment signified to those who opposed it.

Support for Velikovsky concentrated among the lay public, humanists and social scientists, and, interestingly, scientists working for private industry.²³ For Velikovsky and the inner circle, the youthful exuberance for his doctrines was both flattering and a bit of an embarrassment. As Chris Sherrerd, a peripheral member of his inner circle of devotees, wrote to Velikovsky in 1968: "I suspect that much of the support you are finding on college campuses is mot[j]ivated not so much epistemologically but rather socially: as part of a general revolt of today's youth against 'the establishment.'²⁴ If youth were following Velikovsky en masse, the Velikovskians wanted it to be not because he was rejected by the "Establishment" but because he was *right*.

The issue of correctness crops up repeatedly in pro-Velikovsky articles and underscores that this movement was not "antiscience" in any straightforward way. One article from 1968 asserted that his resurgence "is due to one circumstance that the Scientific Establishment did not foresee when it all but unanimously dismissed Velikovsky as a crank and mocked his theories as ridiculous. With the accumulation of new knowledge, especially that gathered in the last decade by space probes"—such as the unexpectedly high temperature of Venus, radio noises emitted from a cold Jupiter, and especially the (disputed) detection of hydrocarbons in the Venusian atmosphere—"Velikovsky's picture of the solar system has proved to be more accurate on many important points than the theories embraced by the Establishment."²⁵ (The first two of these findings are real phenomena, but astronomy both in the 1970s and today attributes them to conventional mechanisms of

geophysics, such as the greenhouse effect for Venus; the hydrocarbon finding was later retracted as spurious.) A combination of excitement about new astrophysical discoveries, a chafing at the bonds of authority, and the widespread distribution of Velikovsky's works in paperback changed the climate.

Nowhere was this more visible than in the rise of college courses dedicated to exploring Velikovsky's work. Much as he had long predicted and fervently desired, *Worlds in Collision* became required reading in colleges across the United States and Canada, although not always in a manner that Velikovsky would have found flattering. For example, W. C. Straka, an assistant professor of astronomy at Boston University, taught a course called Science and Anti-science in Astronomy, where he assigned *Worlds in Collision* in order to debunk it.²⁶ More intriguing were courses that defended Velikovsky's theories to the young. Given the outsider status of Velikovskianism, it is not surprising to learn that many of these instructors were adjuncts at less prominent institutions, and even they had to fight to get their courses listed. A scheduled course at the University of Alabama was canceled at the last minute because of controversy over an advertisement for the class posted by the teacher.²⁷ A course at Penn State was also scrapped, with the argument that "students at the freshman and sophomore level can't judge what is correct or incorrect reasoning. We feel they should only be taught material that is correct beyond any doubt."²⁸ (The wrangling about the meaning of that statement occupied many pages of appeal and protest. Although the course was never reinstated, the professor was eventually granted tenure.) In 1971 Velikovsky's close acolyte C. J. Ransom successfully struggled to get a course on the theories accepted at Texas Christian University in Fort Worth.

This night course proved very popular, with an enrollment of twenty-nine students. "Overall the students agree with your theory," Ransom wrote to Velikovsky. "Most of the discussion concerns details, and no one seems opposed to the total concept."²⁹ Three days later he added: "To the young people, the theory seems quite logical and some do not understand why there is so much controversy."³⁰ Another close disciple, Lynn Rose, used some Velikovskian material in his philosophy of science class at SUNY-Buffalo (today the University at Buffalo) in 1971, and by 1973 he was teaching courses entirely devoted to *Worlds in Collision*.³¹ Rose was renounced; he could do as he wished. Others had to exploit the makeshift experiments of the Age of Aquarius, such as the proliferation of "free universities" that paralleled established institutions of higher education. There were courses on Velikovsky at the Free University at

the University of Pennsylvania, the University of Connecticut Free University, and even at the Medical College of Virginia.³²

Counter-Establishment Science, in Print and in Public

Ben Bova, the editor of the science fiction magazine *Analog*, believed that the enthusiasm for Velikovsky was news and thus should be addressed, but he privately fumed against the Velikovskians. "Sometimes it's not your enemies that hurt you, it's your friends. The only thing more tedious, sententious and lacking in physical proof than Velikovsky's own writings are the writings of many of those who attempt to support his thesis," he wrote to Lynn Rose in 1974. "I'm not interested in counting alleged errors in articles either by or for Velikovsky. I am interested in physical evidence either for or against his ideas, the kind of evidence that one uses to decide the validity of any other physical theory."³³ And that evidence, to his mind, was sorely lacking: "Velikovsky's ideas hold about as much water as a well-worn piece of cheesecloth. They're the result of trying to find one sweeping explanation for every strange and wonderful event that confronts us; this is a syndrome that's very common in science fiction."³⁴ Nonetheless, in the spirit of fairness, he spent two years negotiating with Velikovsky's inner circle to get the master to write a piece for *Analog* to address negative articles that had appeared there. After countless stipulations about copyright, billing on the cover, space constraints, and more, Bova called the whole thing off in 1975. "This hardly seems like the attitude of a man who wants to use rational discourse to convince skeptics," he wrote to Frederic Jueneman. "He's acting like a petulant child."³⁵

There was a moment when Velikovsky would have leapt at the chance to be published in a broad-circulation magazine like *Analog*, but not anymore, not during his season of grooviness. The 1970s saw the emergence of dedicated journals that promoted Velikovskianism, packed with articles bristling with footnotes, equations, and archeological evidence.³⁶ Though Velikovsky had not been accepted into the Establishment, he now found himself with a full-blown counter-Establishment: This was a sudden development. As recently as 1967, he felt so locked out of print venues for his ideas—aside from his books, of course, which continued to sell—that he even took special pains with an undergraduate periodical.

That April, *Yale Scientific Magazine*, "operated by undergraduates with complete editorial freedom" from the elite educational institution in New Haven, published a special issue focusing on a dispassionate scientific discussion of one aspect of Velikovsky's theories: the issues

surrounding Venus, including recent discoveries from space probes. The editor, John W. Crowley, insisted that the magazine "does not pretend either to vindicate or to demolish Velikovsky's ideas in this issue; we seek only to present a paradigm for further discussion by avoiding the abusive tone" of prior discourse.³⁷ The centerpiece of the issue was Velikovsky's article "Venus—a Youthful Planet," which had been written in 1963 and submitted to the *Proceedings of the American Philosophical Society* by Princeton University geologist Harry Hess, a member of that august organization. The dispute over whether to publish it almost ruptured the journal's editorial board, so a separate panel was established to decide upon the fate of the piece. In January 1964 Velikovsky was informed that the article had been rejected, and it was subsequently also rejected by the *Bulletin of the Atomic Scientists*. *Yale Scientific Magazine* was to be its home.³⁸ It was followed by friendly and not-so-friendly critiques from University of Kansas chemist Albert Burgstrahler and Columbia astronomer Lloyd Motz, respectively, both rebutted at length by Velikovsky.³⁹ In 1967, this was the best that he could manage; within five years, the situation had utterly changed.

The first Velikovskian journal initially had nothing to do with Velikovsky. It was called *Pensée* and was officially published in Portland, Oregon, through the Student Academic Freedom Forum of Lewis and Clark College. It is very difficult to reconstruct the early history of the journal. According to a press release for a Velikovsky symposium hosted by *Pensée* at that college in 1972, it was founded in 1966 by David Talbot, then an undergraduate at Portland State University.⁴⁰ No issues appear to survive from those early years. In the winter of 1970–71, the journal was reactivated under the editorship of David's brother, Stephen Talbot, a graduate of Wheaton College (where he had edited the school paper). Judging from the content of these early issues, *Pensée* was a rather-typical student journal in those countercultural days, with opinion battles pro and con on issues like Vietnam (June 1971), local environmental activism (November 1971), and abortion (January 1972). Of a medium-sized format akin to *Time* magazine, although much thinner and with less glossy, black-and-white pages, each month's installment began with an amusing series of sarcastic commentaries on national and local issues—often with a conservative bent—and signed pieces hailed from undergraduate and graduate students across the Portland region. The content was haphazard in both origin and quality, and the artwork also displayed some of the rushed character of many countercultural publications. Only rarely did Stephen (who characterized himself in his byline as "an on-and-off-again student") choose to pen a piece, as he

did in June 1971, "The Population Crisis Is a Put-On," articulating a view that skewed slightly to the right in the wake of Paul Ehrlich and Anne Ehrlich's *The Population Bomb* (1968).⁴¹ The journal had nothing to do with science and not even a hint of Velikovsky—no Venus or Egyptian king lists or boycott campaigns against Macmillan. In May 1972 the entire emphasis shifted. David Talbot suddenly appeared as the magazine's publisher (earlier it had been Robert G. Wallenstein) and Stephen remained the editor. The Talbots launched a series entitled "Immanuel Velikovsky Reconsidered" to examine the debates over cosmic catastrophism, including some contributions from Velikovsky himself. It was a fateful decision: the circulation of the magazine spiked, its content became entirely dedicated to Velikovsky, and by 1974 the editorial board was populated by the inner circle, including Ralph Juergens, William Mullen, and C. J. Ransom. In appearance, too, *Pensée* began to look slightly glossier, the layout less jury-rigged and more professionally seamless (fig. 7.1). Some of that was the benefit of experience; the rest was due to the magazine's surprising success and improved financial situation.

The counterculture gave birth to *Pensée*, Velikovsky's theories gave the magazine a mission, and then *Pensée* returned the favor by bringing Velikovskianism to the counterculture. *Pensée* provided a forum for his supporters (and some critics) to discuss their thoughts, to puzzle through problems in the chronology of Egypt's Middle Kingdom or the orbital dampening of Venus—in short, to build a community. Circulation boomed: for the two and a half years of its Velikovskian adventure, *Pensée* had an annual circulation of 10,000–20,000, but the first issue in the Velikovsky series was reprinted twice, with a total run of 75,000 copies.⁴² Not bad for a fly-by-night operation in Portland. Submissions flooded in, and the Talbot brothers (principally Stephen) had to develop a system to filter out the good from the bad. They borrowed a practice from the academic establishment, one that has often been held up as differentiating "real science" from "crackpot writings": peer review. Every submission to *Pensée*—with the important exception of those by Velikovsky—was reviewed, often by the inner circle. Not surprisingly, many of the critical anti-Velikovsky pieces were rejected or returned for revisions, usually because of logical flaws or problems with the empirical data.⁴³ (Several were published upon revision.)

1974: *The High Tide*

Velikovsky had for years been trying to get a hearing before a committee of scientists, an organized panel of diverse experts in Assyriology,

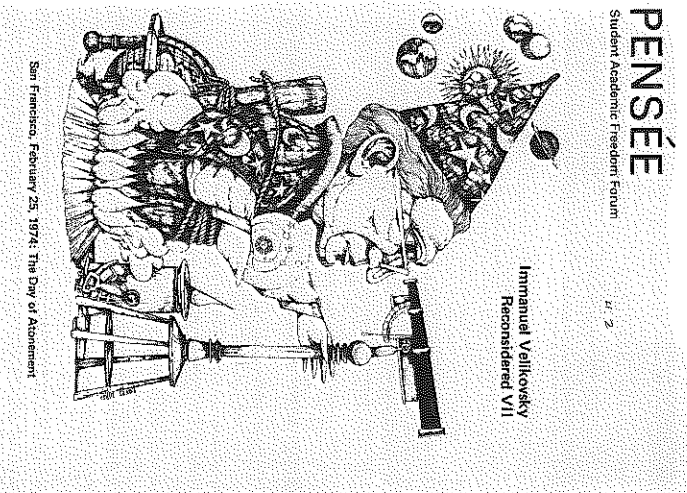


FIGURE 7.1 The cover of the spring 1974 issue of *Pensée*, published by the Student Academic Freedom Forum of Lewis and Clark College in Portland, Oregon. This, the seventh issue in the wildly popular "Immanuel Velikovsky Reconsidered" series, chronicles in detail the confrontation between Velikovsky and his critics at the February 1974 meeting of the American Association for the Advancement of Science, held in San Francisco. The glossy quality and high production values of this series, which contrast with the earlier non-Velikovskian *Pensée*, are easily visible.

astrophysics, planetary science, and history. In 1966 he approached the American Association for the Advancement of Science (AAAS) and received no response.⁴⁴ Around the same time as the phenomenal success of the first Velikovskian journal, however, certain members of the academic community thought, for the first time since the uproar of 1950, that they should confront Velikovsky directly. There is no question that student interest in *Worlds in Collision* and his other books motivated these Establishment scientists; in the late 1960s Cornell astronomer Carl Sagan and a few others informally suggested that perhaps it was time to refute Velikovsky so that students would not be led astray by one-sided endorsements of cosmic catastrophism.⁴⁵ But although Sagan put together a symposium at the AAAS meeting in 1969 on UFOs, there was no movement on the Velikovsky issue.

Then in 1973, Ivan King, the chair of the astronomy section of the

AAAS, and Owen Gingerich, chair of the history of science section, decided to sponsor a symposium on Velikovsky for the 1974 annual meeting, scheduled for February. This event is, next to the 1950 boycott campaign, the single most discussed episode of Velikovsky's career. Everyone who has written about it has been eager to declare one side—the scientists or Velikovsky—the victor.⁴⁶ My goal here is different: to focus on the interpretations attached to this event, especially by the Velikovskians. The year 1974 featured not only the AAAS meeting; it was an annus mirabilis of four separate Velikovsky symposia, of which San Francisco was just the kickoff. Putting the controversial first symposium in context also highlights that the AAAS event was not so much an attempt to staunch the countercultural current on which Velikovsky was borne but more a gambit to join it in order to shape the flow.

It didn't work. The symposium took place at the St. Francis Hotel on 25 February 1974 before a tremendous audience (estimates vary between 500 and the room's capacity of 1,500, with the actual number likely closer to the latter) and lasted for seven hours—four hours in the morning and an additional three in the evening. The participants—sociologist Norman W. Storer, astronomer Carl Sagan, physicist J. Derul Mulholland, statistician and amateur Assyriologist Peter Huber, physicist Irving Michelson, and Velikovsky himself—were all supposed to speak within defined time periods and then address some questions from the audience. Sagan and Velikovsky both went significantly over their time allotments (necessitating the evening session), although Velikovsky more so, on the grounds that only he and Michelson were speaking on his behalf and that most of the audience had come to see him anyway (which happened to be true). The anti-Velikovsky papers were later published as a volume by Cornell University Press after negotiations broke down over the length of the rebuttals Velikovsky wished to include. He and Michelson published their presentations in *Pensée*.⁴⁷

After the fact the discussion was reduced to a head-on confrontation between the seventy-nine-year-old catastrophist and America's most popular astronomer, Carl Sagan (fig. 7.2). Those looking for sharp verbal fireworks were mostly disappointed. Velikovsky spoke eloquently and at great length about his concepts, and after making some suggestions for the Viking probe to Mars based on his conclusions, he ended his speech by hurling down a gauntlet: "None of my critics can erase the magnetosphere, nobody can stop the noises of Jupiter, nobody can cool off Venus, and nobody can change a single sentence in my books."⁴⁸ Applause ensued, and so did questions, which Velikovsky addressed effusively, his responses to single inquiries at times occupying whole pages

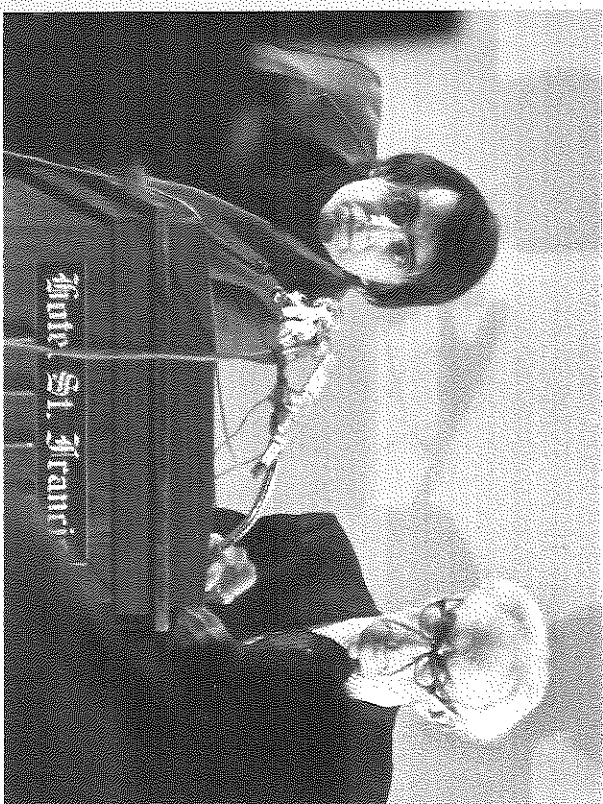


FIGURE 7.2 Carl Sagan (left), in his trademark turtleneck and blazer, and Immanuel Velikovsky (right), in his no-less-characteristic dark suit and tie, on the dais at the AAAS annual meeting at the St. Francis Hotel in San Francisco, February 1974. This image, which nicely depicts the contrasting styles of the generational clash of the 1970s as well as defying expectations (the hipper Sagan is the less countercultural of the two), silently omits the other participants in the symposium, perpetuating the false impression that the meeting was a one-on-one confrontation between the two figures. Reprinted by permission of Dale Gulkshank.

of the transcripts and wandering across the range of human erudition (but not always answering the question).

Sagan's paper was also far too long for a twenty- to thirty-minute presentation, and he skimmed through it, reading segments here and there. Although he attempted a detailed refutation of several of Velikovsky's principal assertions, the rushed presentation and even the published version contained numerous errors, which harmed his arguments among the intended audience. Nonetheless, he did display moments of sparkling frustration, as in response to a question about the radio noises on Jupiter: "There is bound to be some residual magnetism everywhere. There is bound to be, just as in the Earth's oxidizing atmosphere there are today hydrocarbons. Methane is one part per million of the Earth's atmosphere. That has nothing to do with manna. It has nothing to do with any of this."⁴⁹ Likewise, Velikovsky, in the midst of a voluminous "short comment" on Norman Storer's presentation, had one of his several rhetorical triumphs: "But neutral is not objective.

You cannot be objective between evil and the victim of evil, neutral between the behavior of science—how it was and how it started from 1950 and continued till today, almost till today, till yesterday, better let us say.”⁵⁰ But the net result was more confusion than enlightenment. Both the Velikovskians and their critics held unanimous views of who won—they just were different unanimous views. From these accounts, we should note the intense effort both sides expended in spinning the AAAS symposium, confirming that the event was more about public relations and propaganda than coming to a scientific evaluation of Velikovsky’s theories.⁵¹

Norman Storer, whose opening paper at the symposium was decidedly lackluster, found the case more interesting in retrospect. “My private opinion is that the old guy is quite out of his tree, and I am much more negative about him after having seen him in action than I was before the San Francisco meeting,” he wrote later. “But the interesting thing is his following—who are they, what structural circumstances might account for their ‘faith,’ and what sustains them in the face of overwhelming evidence to the contrary? Questions like this suggest a rich lode of sociological material for someone who wants to dig into ‘em.”⁵² But there was to be no extensive study of Velikovsky’s counter-cultural following nor any further attempts to confront Velikovsky directly on the scientists’ own turf. Dennis Rawlins, a fellow of the Royal Astronomical Society, deftly noted the Catch-22: “If one simply ignores the crank, this is ‘close-mindedness’ or ‘arrogance.’ If one then instead agrees to meet him in debate, this is billed as showing that he is a serious scholar. (For why else would the lordly establishment agree even to discuss him?) Inksome *either* way.”⁵³ So the 1974 experiment was never repeated. It had been neither success nor failure. It had raised the visibility of scientific opposition but had resolved nothing.

The Velikovskians, however, were on a roll. Lewis and Clark College, in Portland, had hosted the first Velikovskian conference on 16–18 August 1972 under the prodding of *Pensée* and its editors. But 1974 was different, studded with panels and discussions of Velikovsky. In May, Velikovsky received an honorary degree from Lethbridge University in Canada and then traveled to McMaster University in Hamilton, Ontario, for an oversubscribed conference on 17–19 June, entitled “Velikovsky and the Recent History of the Solar System.” He had some time to rest before trekking to Duquesne University in Pittsburgh for a History Forum on 27 October to 2 November and immediately thereafter shutting to a November session of the Philosophy of Science Association meeting at Notre Dame, entitled “Velikovsky and the Politics of

Science,” where the speakers were three Velikovskians (the man himself, Lynn Rose, and Rose’s fellow Buffalo professor Antoinette M. Patterson) juxtaposed with one critical physicist (Michael W. Friedlander of Washington University in St. Louis).⁵⁴ Papers from all these venues appeared shortly afterward, indicating that the San Francisco meeting had done little to dampen enthusiasm for the author of *Worlds in Collision* and his theories.

And when those papers appeared in 1974, they usually appeared in *Pensée*, which had become—next to Velikovsky himself—the single most important clearing house for information about his concepts. Not imagining that they could write directly to the man in Princeton, people wrote to the journal, which they assumed had a direct connection with Velikovsky. That connection was in fact rather tenuous, and the tensions surrounding just how much control Velikovsky did or should have over the contents of *Pensée* would soon come to a head. The Talbott brothers were not in Velikovsky’s inner circle, and the contributors for *Pensée* included critics of Velikovsky’s theories. When Velikovsky attempted to assert control, he shattered the entire venture.

The Gurni out of Season

Why was *Pensée* so popular? To judge from the correspondence of contributors and editors (the subscribers are, sadly, impossible to trace fully), the primary reason was that what it published seemed to be *real*: actual scholarship, actual science. The periodical had peer review, boasted a large readership, and featured detailed discussions on many sides of an issue. This couldn’t be pseudoscience. True, many of the citations were to other articles in *Pensée*, but that was because Establishment journals had unfairly frozen out these discussions. According to Lewis Greenberg, writing to Velikovsky in 1974: “The credibility of *Pensée* depends upon its ability to remain positively inclined to your work without seeming to be too one-sided or partial.”⁵⁵

Not everyone thought the situation was clear-cut. While it was obviously beneficial for the journal not to appear as a propaganda organ, perhaps some skewing was permissible. “I do not fully agree that our effort is scholarship only and not propaganda, if the definition and not connotation of propaganda is used,” C. J. Ransom wrote to Stephen Talbott in 1975. “We do not need to propagate discussion of the other side since they have their own propaganda machines. However, a certain amount of mixing would act as a catalyst to encouraging discussion of Velikovsky’s works.”⁵⁶ Talbott, in a slightly earlier letter to Lynn Rose

discussing the same issues, disagreed, and his response is worth quoting at some length:

Considerations centering on the overall balance among journals do not by themselves suggest any particular balance for *Pensee* . . . [W]e have to deal realistically with the fact that, for example, the nearly universal opinion among "experts" is that available data do not allow for a recent Velikovskian episode on the lunar surface. If our more informed readers see us failing to interact with the weight of conventional opinion on the subject, they can only discount us. After all, there exists every sort of wierd [*sic*] publication and society, surviving merrily on in isolation, while boldly "challenging" accepted viewpoints in their widely unread pronouncements. Nobody bothers with them. The reason *Pensee* has achieved what it has is that it went straight into the scientific community (read: community of conventional thinkers) with its bold challenges, seeking in every way possible to avoid the isolation that normally would befall such an effort. That meant involving conventional antagonists.

The problem, he continued, was partially the perennial editorial conundrum of how to fill an issue: "It is my opinion that, up until now, and even now, we could not put together a presentable series of issues consisting solely of contributions by Velikovskians. The scholarship is simply not there; the result would look anemic. There are too few Velikovskian researchers, and not in enough fields."⁵⁷

Velikovsky had been intimately involved with the editing of the journal for some time. For example, Thomas Ferré, of the Humanities Department at the Oregon College of Education, was incensed with Stephen Talbort as early as 1972 for allowing Velikovsky, he claimed, to edit his submission for *Pensee* for both content and style; he threatened legal action if the piece was published.⁵⁸ An article in *Science* on the AAS meeting attributed the rise of Velikovskianism to *Pensee* and noted that while there was no financial connection between the two, "there is a kind of symbiotic relationship—he is good for circulation and circulation is good for him—and Velikovsky has, on occasion, exerted editorial influence." When interviewed for the piece, Velikovsky told the author that he had at one point given the editors an "ultimatum" when he wished to respond to a critical article in the same issue it appeared, as opposed to waiting for the next issue: "I said if they didn't do so, I would never write for them again."⁵⁹ *Pensee* backed down.

Ironically, the very success that prompted Velikovsky and his cohort to exert stronger control over the journal also induced the Talborts to assert their autonomy. Relations soured among the principals, and Greenberg in January 1975 called Stephen Talbort "an inflexible, arrogant egomaniac who employs his editorial position as a dictator wields political power."⁶⁰ Still, in direct letters to the Talborts, the tone remained civil. Ransom worriedly wrote to Stephen that if he did not continue to grant Velikovsky editorial say over the journal's contents, the catastrophist might walk away.⁶¹ Talbort, in the same long letter to Rose quoted above, stood firm. "The 'proposed break' with Velikovsky, I trust you realize, is not anything I am proposing, but rather he has threatened," he wrote. Yet he insisted that *Pensee* was much more than a mouthpiece for Velikovsky, and that he did not believe "that the consideration of any single man's work is a sufficient base upon which to operate a journal." Furthermore, "it would surely be suicidal for us to commit ourselves editorially to the truth of his work . . . *Pensee* cannot be '100% pro-Velikovsky'—or pro-Velikovsky at all, editorially. The commitment which 'has already been made' is—just as you remark—that 'Velikovsky was worth reconsidering'—neither more nor less. To commit ourselves further would be to remove ourselves from the ranks of truth-seeking journals to those of the axe-grinding journals."⁶² It proved suicidal, however, to fail to take Velikovsky's threats seriously. After ten pro-Velikovsky issues, the catastrophist withdrew.⁶³ *Pensee* lay fallow in 1975, publishing no issues.

New Velikovskian publishing projects popped up. In 1974 there appeared a single issue of *Chron: Journal of Interdisciplinary Studies*, run out of the Oregon College of Education by the same Thomas Ferré who had stormed out of *Pensee* in 1972. This journal was interested principally in the humanistic aspects of catastrophism and looked forward to compiling a special issue "on theoretical psychology (archetypes, collective amnesia, neo-Freudianism, three-brains hypothesis, etc.);" and also sought papers "on the work of Joseph Campbell, Cyrus Gordon, and Nikos Kazantzakis."⁶⁴ Lewis Greenberg attributed its speedy demise "to some rather inexplicable behavior on the part of Ferré [*sic*] who has failed to send out the first issue to many subscribers and chooses not to communicate with anyone since early October from his secluded retreat in Pocatello[, Idaho]."⁶⁵ Greenberg and Warner Sizemore seized the initiative and moved the journal east to Glassboro State College in New Jersey—where history professor Robert Hewsen announced the opening of a Center for Velikovskian Studies "as a focal point for the collection and dissemination of information relevant to the work of

Dr. Immanuel Velikovsky."⁶⁶ Contrary to his previous statement in favor of *Pensée's* objectivity, in late 1974 Greenberg assured Velikovsky that the new journal would toe the party line: "I will promise you this right now. The new journal will have its doors solidly barred to any would-be critics. We are not interested in the open forum posture presently assumed by PENSEE. I should like to go on record with you personally on that account."⁶⁷ The new journal was *Kronos* and ran from spring 1975 until 1988.

Kronos was a smaller affair than *Pensée* by an order of magnitude: its circulation peaked at 2,400 in its second year, settled to roughly 1,500 by its tenth year. It was physically smaller than *Pensée* too, with matte pages and occasionally an almost mimeographed feel, sparse in images and heavy on footnotes. By 1980, it had subscribers in twenty-four foreign countries, all the while competing with the British "revisionist" journal *S.I.S. Review*. In the first issue, the editorial preface declared: "Thus we present KRONOS, a journal of interdisciplinary synthesis, whose initial contents are dedicated to *Immanuel Velikovsky*—progenitor and inspirational force for the ideas contained herein." But, careful to avoid angering Velikovsky by attributing to him positions he did not hold, they immediately added a footnote: "The views expressed by the authors in this journal are their own and do not necessarily reflect editorial opinion nor that of Dr. Velikovsky."⁶⁸ (They also added, later in the issue: "KRONOS, an independent journal, is in no way affiliated with Chiron or *Pensée* or the Student Academic Freedom Forum.")⁶⁹ Velikovsky's unhappiness with the Talbots did not imply he would be kinder to Sizemore and Greenberg. He received the first issue after returning from a visit to the hospital for some medical treatments (he was eighty-one), and he wrote Greenberg a letter trashing *Kronos* and offering suggestions. Greenberg acceded to all of them.⁷⁰

Back in Oregon, *Pensée* was about to fold, and the wrangling over the financial results of that event—selling mailing lists, possession of rights to the *Velikovsky Reconsidered* edited volume—occupies many pages of angry correspondence in Velikovsky's personal archive. It would be impossible to tease apart accusations and counteraccusations in a reasonable space, even if we had complete documentation from all sides (which we do not). Suffice it to say that in the end, *Pensée* shut up shop for good. Harvard astronomer Donald Menzel penned a glowing letter to Stephen expressing his delight in the news that *Pensée* was no more, since the "magazine is, in my opinion, detrimental to the best interests of science."⁷¹ A bewildered Velikovsky supporter wrote Menzel to see whether this was a mistake or a prank. No such luck, Menzel retorted:

"*Pensée*, from its inception, has been primarily devoted to the glorification of Velikovsky, one of the greatest Cranks of modern times. . . . It is the magazine, *Pensée*, which is irresponsible."⁷² And he would dance on its grave while he could.

Meanwhile, *Kronos* forged ahead, accepting and publishing articles on questions of planetary atmospheres, moon craters, and the exact dating of various Babylonian conflicts. Sizemore was pleased: "We now have an organ—a powerful organ—that will allow no distortion of your work to go unanswered."⁷³ But only if people read it. There was no getting around the issue of Velikovsky's control over the journal and the tension between allowing people to debate his views—letting them live in the conflict of scholarship—and having them remain faithful, even if the project died in the process. The very insurgent quality that had drawn the counterculture to Velikovsky made it want to push farther, question his conclusions, edge closer to finding the *real* truth, and he was no more going to allow that for *Kronos* than he had for *Pensée*.

In 1977 a man named Jerry Rosenthal inherited a bit of money and, having come to admire Velikovsky's theories and his tenacity in defending them, proposed donating some of those funds toward an expansion of Velikovsky's audience. The problem, as Rosenthal saw it, was not too little scientific research but rather a biased older generation. With better public relations, Velikovskians could win over the young—the scientists and decision makers of the next generation. "Your primary emphasis, as I talk with you," he wrote to Velikovsky, "is toward research and print media publication. This reaches only a small fraction of the public today as movies, TV, radio, even lectures influence many more people. Even young scientists today, because your books and theory are virtually blacklisted, cannot easily be introduced to you." But with the right medium, Velikovsky's reach could be extended dramatically. "Young people have a strong desire to know the facts. They are misled and feel empty with the pseudo-answers of the establishment," Rosenthal continued. "Some spring off into religious cults or into escapist philosophy; some remain in the establishment knowingly frustrated. There is also a large group of people interested in space, science fiction, and the sciences that would be potential customers of a Velikovsky media event. Young people must be made aware before they get a vested interest in the existing system."⁷⁴

Rosenthal proposed bankrolling a documentary or a TV series. This was not a new idea: the Canadian Broadcasting Corporation had produced Henry Zemel's *Velikovsky: Bonds of the Past* in 1972, and the British Broadcasting Corporation released *Horizon: Worlds in Collis-*

sion that same year Velikovsky suggested that Rosenthal give \$4,000 to *Kronos* instead. The latter was unhappy. "I specifically stated that my continued support was dependent upon the expansion of the readership and the necessary broadening of the base for whom *Kronos* could be a useful journal," he complained. "There is a mass market for these ideas: Close Encounters, Star Wars, etc. all prove the mass appeal that popularly packaged Velikovsky would have. Talbot had 35,000 copies printed—over ten times what you might reach, and Sagan reaches millions!" If Velikovsky were not more cooperative, then Rosenthal would no longer give money to ventures like the special *Kronos* issue on the AAAA meeting, which he considered "an ego-boosting rejoinder to Sagan."⁷⁵ Velikovsky might be "a great scientist and researcher, but is a failure at leading a revolutionary movement," he wrote to Greenberg. He suggested that the "movement must be simplified, digested and re-gurgitated for the masses. They will then do the work you are trying to do—apply pressure on the scientists, universities, Congress. Then the power, money, success, research grants, books, television shows, expeditions and fame will be given to you."⁷⁶ Velikovsky, Greenberg, and the *Kronos* set would not cooperate, and so Rosenthal walked away, bewildered at the man who had captivated hundreds of thousands with his writings but now seemed willing to converse only with a faithful band of a few dozen. We have reached the end of the season.

Conclusion

Today, Velikovsky's name has fallen into obscurity, recalled only dimly by those who associate the name with late-night dorm room conversations in the glow of the lava lamp (and perhaps the bong). *Worlds in Collision*, that product of Freudianism and Zionism from the late 1930s, fanned into the public eye by the gusts of anti-Communism and anti-Lysenkoism in the early 1950s, bloomed into one of the totemic books of the early 1970s. Why? What made Velikovsky's cosmic catastrophism so beloved of segments of the counterculture—so "groovy"? Although *Worlds in Collision* bears traces of its original contexts, to those ignorant of the history—and, in the period in question, just about all Velikovsky's young readers can be considered such—the book seemed very much of the moment. Consider two other major best sellers of the 1970s that have lived on in public consciousness a lot longer than Velikovsky's has, and the affinities are obvious.

The first, often juxtaposed at the time with *Worlds in Collision*, as much because of the author's alliterative foreign name as the obvious

similarities in argument, was Erich von Däniken's megapopular *Chariots of the Gods?*, published in German in 1968 and soon translated into dozens of languages. Von Däniken claimed in this work that the wonders of ancient civilization were the products of "gods"—visitors from other worlds—who came to Earth in antiquity, interbred with the almost-simian hominoids, bequeathed civilization to their progeny, and introduced technological advances (pyramids, cities on mountains). Any reader can pick up on the similarities between von Däniken and Velikovsky. The former also read the Bible and mythology in his quest for ancient astronauts: "The almost uniform texts can stem only from facts, *i.e.*, from prehistoric events. They related what was actually there to see." Von Däniken even saw the two approaches as compatible: after the Venus catastrophe, perhaps the extent of planetary destruction witnessed from space prompted the Martians to visit Earth.⁷⁷ Von Däniken's theories skyrocketed in popularity, often among the same set of college enthusiasts who devoured the collected oeuvre of Immanuel Velikovsky. Velikovsky and the Velikovskians insisted on putting significant distance between their own claims and those of the godly charioters. They maintained that Velikovsky was more careful with evidence, while von Däniken admitted to massaging facts to suit his narrative. Even critics, like science fiction writer Ben Bova, agreed that "[t]here is no question of fraud, or of winking at known facts, in Velikovsky's case."⁷⁸

Today, von Däniken is substantially more recognizable than Velikovsky. This is in part because he is still publishing—his most recent book appeared in 2014⁷⁹—although with markedly reduced sales, but probably more because his arguments and scenarios for ancient history have continued to be appropriated in science fiction blockbuster movies (*Indiana Jones and the Kingdom of the Crystal Skull*, *Alien vs. Predator*, *Transformers: Revenge of the Fallen*, and *Prometheus*, to name four recent ones). The continuing life of alien-astronaut theories should not obscure their very particular emergence in the countercultural soup of enthusiasm for the Space Age, the trippiness of astronomy, the quest for spirituality in ancient texts, and the desire for a universal explanation for everything.

The second interesting text for comparison is the top best-selling work of the 1970s: Hal Lindsey's *The Late Great Planet Earth*.⁸⁰ Lindsey represents another strand of the counterculture often considered antithetical to science: evangelical Christianity. While the manifestly countercultural Jesus Freaks of the 1970s are starting to receive scholarly attention, the much more studied right-wing evangelical revival

is often considered a breed apart, largely on political grounds.⁸¹ But Lindsey read his Bible (both Old and New Testaments) in a manner that resonated with Velikovsky—and surely did with his readers as well. For Velikovsky, the catastrophes depicted in the historical parts of the Bible were real, just couched in metaphorical language; for Lindsey, the prophetic ecstasies of the Bible were no less real, no less metaphorically presented. Gog and Magog, the Warsaw Pact, Red China, the Four Horsemen—Revelation was nothing more than plain speaking once the reader approached the text properly. And the book and its notions took wing, nourishing an apocalyptic dispensationalism in American spirituality that remains alive today.⁸²

The unseasonable grooviness of Immanuel Velikovsky was not so unseasonable after all, despite the decided ungrooviness of the strikingly tall senior citizen with his dark suits, heavy Russian-Israeli accent, and dreams of scientific respectability. He remained more or less the same figure he had been as a struggling émigré in New York City during World War II. He did not turn himself into a countercultural guru; the youth did that for him, and Velikovsky both relished and chafed against the honor. They placed him on that pedestal because he represented a kind of science they felt spoke to them, and they propagated that science using a toolkit widespread among various strands of the counterculture—new journals, new courses, new conferences—repurposed to fit their age as much as von Däniken's astral optimism and Lindsey's eschatological pessimism were. It wasn't the adoration from certain segments of the counterculture that eventually spooked Velikovsky so that he retreated to his home at 78 Hartley Avenue in Princeton, New Jersey, until his death on 17 November 1979—it was their desire to take his new science and make it their own. That, he felt, was decidedly not in season.

Acknowledgments

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Notes

1. Murray Gell-Mann, "How Scientists Can Really Help," *Physics Today* 24 (May 1971): 23. On the obvious and rapid expansion of interest in the oc-

cult in this period, see Richard G. Kyle, *The New Age Movement in American Culture* (Lanham, MD: University Press of America, 1995), esp. 47; Steven Duch, "Four Decades of Fringe Literature," *Skeptical Inquirer* 10 (1986): 342–51; Edward A. Tiryakian, "Toward the Sociology of Esoteric Culture," *American Journal of Sociology* 78 (1972): 491–512; and Andrew W. Greeley, "Superstition, Ecstasy and Tribal Consciousness," *Social Research* 37 (Summer 1970): 203–11.

2. Immanuel Velikovsky, *Worlds in Collision* (New York: Macmillan, 1950). A huge amount of literature was produced by and about Velikovsky during his lifetime. For surveys of the Velikovsky debates with differing degrees of partisanship, see Henry H. Bauer, *Beyond Velikovsky: The History of a Public Controversy* (Urbana: University of Illinois Press, 1984); Robert E. McAulay, "Substantive and Ideological Aspects of Science: An Analysis of the Velikovsky Controversy" (MA thesis, University of New Mexico, Albuquerque, 1975); Alfred de Grazia, ed., *The Velikovsky Affair: The Warfare of Science and Scientism* (New Hyde Park, NY: University Books, [1966]); and Diane Leroy Vorhees, "The 'Jewish Science' of Immanuel Velikovsky: Culture and Biography as Ideational Determinants" (PhD diss., Bowling Green State University, 1990).

3. A detailed account of these events can be found in Michael D. Gordin, *The Pseudoscience Wars: Immanuel Velikovsky and the Birth of the Modern Fringe* (Chicago: University of Chicago Press, 2012), chap. 1.

4. Sigmund Freud, *Moses and Monotheism*, trans. Katherine Jones (New York: Vintage Books, 1967); originally published in German in 1938 and original Jones translation published in 1939.

5. Gordin, *Pseudoscience Wars*, chap. 2.

6. *Ibid.*, chap. 3.

7. Chester R. Longwell, "The 1950 Silly Season," *Science* 113, no. 2937 (13 April 1951): 418.

8. Donald Goldsmith, introduction to *Scientists Confront Velikovsky*, ed. Donald Goldsmith (New York: Norton, 1977), 20.

9. Harold Urey to Albert W. Burgstahler, 21 June 1967, Immanuel Velikovsky Papers, Co968, Firestone Library Special Collections, Princeton University (hereafter cited as IVP), 126:8.

10. Theodore Roszak, *The Making of a Counter Culture: Reflections on the Technocratic Society and Its Youthful Opposition* (Garden City, NY: Anchor / Doubleday, 1969), 42.

11. Robert J. Good, "It Can't Be Our Fault, Can It?," *Chemical and Engineering News* 51 (20 August 1973): 3. Historian of science Owen Gingerich agreed, maintaining that Velikovsky represented "a resurgence of interest associated with the disenchantment with science and the science establishment. It's part of a pattern, and has a great appeal to people looking for a literal explanation of miracles." Quoted in Robert Cooke, "Theory on Collision of Planets Sets Up a Few Earthly Ripples, by Jupiter . . .," *Boston Globe*, 26 February 1974, 2.

12. Alvin M. Weinberg, "Science and Trans-science," *Minerva* 10 (1972): 222. On the new sense of vulnerability of the scientific establishment beginning

in the mid-1960s, see Kelly Moore, *Disrupting Science: Social Movements, American Scientists, and the Politics of the Military, 1945-1975* (Princeton, NJ: Princeton University Press, 2008), 37.

13. Peggy Constatine, "Peter Fonda Not Really a Hippie," *Los Angeles Times*, 19 September 1967, D13.

14. Velikovsky to Bruce Mainwaring and John Holbrook, 20 September 1969, IVP 88:6.

15. Immanuel Velikovsky and Lynn E. Rose, "The Sins of the Sons: A Critique of Velikovsky's A.A.A.S. Critics," [late 1970s], IVP 53:7, p. 3. Similar statements appear on pp. 181-82 and 185 of this manuscript, which is a detailed criticism of both the statements made against Velikovsky at the 1974 AAAS meeting and the ensuing publications by those critics in Goldsmith, *Scientists Confront Velikovsky*, and other venues.

16. *Cosmos and Chronos*, no. 4 (December 1967), IVP 126:3.

17. Velikovsky to Sune Hjorth, 7 September 1967, IVP 81:5.

18. Press release from Parsons School of Design, 14 April 1970, IVP 66:3.

19. See the documents about the honorary degree reproduced in E. R. Milton, ed., *Recollections of a Fallen Sky: Velikovsky and Cultural Amnesia: Papers Presented at the University of Lethbridge, May 9 and 10, 1974* (Lethbridge, AB: Unlith Press, 1978).

20. Daniel Cohen, *Myths of the Space Age* (1965; New York: Dodd, Mead, 1967), 191; and Bauer, *Beyond Velikovsky*, 207-8. On counterculture beyond the New Left, see Peter Braunstein and Michael William Doyle, eds., *Imagine Nation: The American Counterculture in the 1960s and 70s* (New York: Routledge, 2002); Michael William Doyle, "Debating the Counterculture: Ecstasy and Anxiety over the Hip Alternative," in *The Columbia Guide to America in the 1960s*, ed. David Farber and Beth Bailey (New York: Columbia University Press, 2001), 143-56; Van Gosse, *Rethinking the New Left: An Interpretative History* (New York: Palgrave Macmillan, 2005); and Christopher Gair, *The American Counterculture* (Edinburgh: Edinburgh University Press, 2007), 8.

21. Patrick Doran, "Living with Velikovsky: Catastrophism as World View," in Milton, *Recollections of a Fallen Sky*, 143.

22. Bruce J. Schulman, *The Seventies: The Great Shift in American Culture, Society, and Politics* (New York: Da Capo Press, 2001), 24.

23. This sociological splitting of Velikovsky's audience draws from Robert McAulay, "Velikovsky and the Infrastructure of Science: The Metaphysics of a Close Encounter," *Theory and Society* 6 (1978): 332. As a view from industry, consider Velikovsky's close supporter Frederic Juenneman, who wrote: "Personally, I don't have a quarrel or an ax to grind with the academic community *per se*; still, as a member of the industrial community I have a growing impatience with those members of the academic hierarchy who have taken it upon themselves to tell me what I should or shouldn't believe." Frederic Juenneman, "The Search for Truth," *Analogue* 94, no. 2 (October 1974): 30. On humanists acting out resentment of the scientists, see George Grinnell (Department of History, McMaster University) to Velikovsky, 14 April 1972, IVP 80:6.

24. Chris Sherred to Velikovsky, 29 July 1968, IVP 97:3.

25. Charles H. McNamara, "The Persecution and Character Assassination

of Immanuel Velikovsky as Performed by the Imagines of the Scientific Establishment," *Philadelphia*, April 1968, 64.

26. W. C. Straka to editors of *Pensée*, 22 June 1972, IVP 128:13.

27. Guenter Koehler to Velikovsky and Elishava Velikovsky, 20 July 1979, IVP 85:23.

28. R. H. Good Jr. to Dr. Hilton Hinderliter, 3 January 1974, IVP 81:4. Hinderliter responded angrily and at great length on 13 February. Ironically, Good had been dismissed from Berkeley in the early 1950s because his own work in abstract quantum field theory was not considered useful for graduate students and was thus pedagogically unacceptable. See David Kaiser, *American Physics and the Cold War Bubble* (Chicago: University of Chicago Press, forthcoming), chap. 4.

29. C. J. Ransom to Velikovsky, 4 October 1971, IVP 92:2.

30. C. J. Ransom to Velikovsky, 7 October 1971, IVP 92:2. Ransom later used the course to produce a popularized introduction to Velikovsky's entire thesis, published as C. J. Ransom, *The Age of Velikovsky* (Glassboro, NJ: Kronos Press, 1976).

31. Lynn E. Rose to Velikovsky, 14 November 1971 and 16 March 1973, IVP 93:1.

32. Jerry Rosenthal to Velikovsky, 18 February 1977, IVP 94:2.

33. Ben Bova to Lynn E. Rose, 20 November 1974, IVP 93:1.

34. Ben Bova, "With Friends Like These . . .," *Analogue* 90, no. 5 (January 1973): 6.

35. Bova to Frederic Juenneman, 7 March 1975, IVP 82:17.

36. On the spectrum of Velikovskian journals, see Bauer, *Beyond Velikovsky*, 68-69.

37. John W. Crowley, "A Scientific Approach to Velikovsky," *Yale Scientific Magazine* 41, no. 7 (April 1967): 5.

38. Immanuel Velikovsky, "Venus—a Youthful Planet," *Yale Scientific Magazine* 41, no. 7 (April 1967): 8-11, 32.

39. Albert W. Burgstahler and Ernest E. Angino, "Venus—Young or Old?," *Yale Scientific Magazine* 41, no. 7 (April 1967): 18-19; Lloyd Motz, "Velikovsky—a Rebuttal," in *ibid.*, 12-13; Immanuel Velikovsky, "A Rejoinder to Burgstahler and Angino," in *ibid.*, 20-25, 32; Immanuel Velikovsky and Ralph E. Juergens, "A Rejoinder to Motz," in *ibid.*, 14-16, 30; and Horace Kallen, "A Letter to the Editor," in *ibid.*, 30. Burgstahler, almost certainly because of his prominent academic credentials, was granted a much greater degree of tolerance in criticizing Velikovsky's framework. Although Burgstahler disagreed with some of Velikovsky's positions, these were only at the level of detail; he endorsed the general picture. Furthermore, being an advocate of other fringe theories—such as his opposition to fluoridation of water or the conventional ascription of Shakespeare authorship—Burgstahler always levied his criticisms respectfully.

40. Press release for Velikovsky Symposium, Lewis and Clark College, [1972], IVP 65:2.

41. Stephen Talbot, "The Population Crisis Is a Put-On," *Pensée* 1, no. 4 (June 1971): 14-15, 30. For more on the debates over population and their

political valence, especially among science and technology enthusiasts on college campuses, see W. Patrick McCray, *The Visioneers: How an Elite Group of Scientists Pursued Space Colonies, Nanotechnology, and a Limitless Future* (Princeton, NJ: Princeton University Press, 2012).

42. Philip M. Boffey, "Worlds in Collision: Runs into Phalanx of Critics," *Chronicle of Higher Education* 8, no. 22 (4 March 1974): 7. On the enormous heterogeneity of publishing ventures spawned by countercultural enthusiasts in the 1970s, see Sam Binkley, *Getting Loose: Lifestyle Consumption in the 1970s* (Durham, NC: Duke University Press, 2007).

43. See Lynn Rose to David Morrison, 26 November 1973, IVP 93:1; and Ralph E. Juergens to Stephen L. Talbot, 30 December 1974, IVP 93:1. On the "scientization" of Velikovskianism in the *Pensée* period, see Judith Fox, "Immanuel Velikovsky and the Scientific Method," *Synthesis* 5 (1980): 49.

44. Albert Burgstahler was the intermediary. See Burgstahler to Velikovsky, 6 December 1966, IVP 71:10.

45. Carl Sagan, *Carl Sagan's Cosmic Connection: An Extraterrestrial Perspective* (1973; Cambridge: Cambridge University Press, 2000), 59; and Albert Shadowitz and Peter Walsh, *The Dark Side of Knowledge: Exploring the Ocult* (Reading, MA: Addison-Wesley, 1976), 241.

46. For pro-Establishment reportage on the AAAS meeting, see Robert Gillette, "Velikovsky: AAAS Forum for a Mild Collision," *Science* 183 (15 March 1974): 1059-62; Boffey, "Worlds in Collision: Runs into Phalanx of Critics"; Miranda Robertson, "Velikovsky in the Open," *Nature* 248 (15 March 1974): 190; George Alexander, "Controversial Author, Scientists in Collision," *Los Angeles Times*, 26 February 1974, A4; Walter Sullivan, "Writer Collides with Scientists," *New York Times*, 26 February 1974, 9; David F. Salisbury, "Velikovsky Cosmology: Theories in Collision," *Christian Science Monitor*, 12 March 1974, 14; and Graham Chedd, "Velikovsky in Chaos," *New Scientist*, 7 March 1974, 624-25. For pro-Velikovskian accounts, see n. 51 below.

47. The relevant sources are Goldsmith, *Scientists Confront Velikovsky*; Immanuel Velikovsky, "My Challenge to Conventional Views in Science," *Pensée* 4, no. 2 (Spring 1974): 10-14; Irving Michelson, "Mechanics Bears Witness," *Pensée* 4, no. 2 (Spring 1974): 15-21; and the verbatim transcripts of the discussions around each paper reproduced in Lynn E. Rose, ed., "Transcripts of the Morning and Evening Sessions of the A.A.A.S. Symposium on 'Velikovsky's Challenge to Science' Held on February 25, 1974," in *Stephen J. Gould and Immanuel Velikovsky: Essays in the Continuing Velikovsky Affair*, ed. Dale Ann Pearlman (Forest Hills, NY: Ivy Press, 1996), 727-95. Sagan's essay, long to begin with and expanded after the meeting, became the focal point of discussions later and was published as Carl Sagan, "An Analysis of *Worlds in Collision*," in Goldsmith, *Scientists Confront Velikovsky*, 41-104. A revised and corrected version is printed in Carl Sagan, *Broca's Brain: Reflections on the Romance of Science* (1974; New York: Presidio Press, 1979), chap. 7. One latter-day Velikovskian devoted an entire monograph to refuting Sagan's piece: Charles Gimenthal, *Carl Sagan and Immanuel Velikovsky*, 2nd ed. (Tempe, AZ: New Falcon Publications, 1995). The Goldsmith volume also includes an essay

by David Morrison ("Planetary Astronomy and Velikovsky's Catastrophism," 145-76) that was not part of the original symposium.

48. Velikovsky, "My Challenge to Conventional Views in Science," 14.

49. Sagan in Rose, "Transcripts of the Morning and Evening Sessions of the A.A.A.S. Symposium," 757.

50. Velikovsky in *ibid.*, 772.

51. Velikovsky and Lynn Rose wrote a book-length manuscript dissecting the meeting and defending Velikovsky against his critics, especially Sagan; see their "The Sins of the Sons: A Critique of Velikovsky's A.A.A.S. Critics," [late 1970s], IVP 53:7. According to them (e.g., p. 2), the pro-Sagan press did not reflect actual events but was part of a conspiracy to taint Velikovsky. For additional negative reviews by the Velikovskians, see "Velikovsky's Challenge to Science," *Pensée* 4, no. 2 (Spring 1974): 23-44; George Grinnell, "Trying to Find the Truth about the Controversial Theories of Velikovsky," *Science Forum* 38 (April 1974): 3-5; Frederic B. Juenneman, "A Kick in the AAAS," *Industrial Research*, August 1976, 9; Charles Gimenthal, "The AAAS Symposium on Velikovsky," in Pearlman, *Stephen J. Gould and Immanuel Velikovsky*, 51-138; Lynn E. Rose, "The A.A.A.S. Affair: From Twenty Years After," in Pearlman, *Stephen J. Gould and Immanuel Velikovsky*, 139-85; George W. Early, "Velikovsky Confronts His Critics," *Fate* 32 (February 1979): 81-88; and Shane Mage, *Velikovsky and His Critics* (Grand Haven, MI: Cornelius Press, 1978).

52. Norman Storer to Sidney M. Wilhelm, 18 April 1974, IVP 93:3.

53. Dennis Rawlins, "Sagan and Velikovsky," *Science News* 105, no. 17 (27 April 1974): 267 (emphasis in original).

54. See the program for McMaster University in IVP 65:3 and the descriptions of the various conferences in Frederic B. Juenneman, *Velikovsky: A Personal View* (1975; Glassboro, NJ: Kronos Press, 1980), 42.

55. Lewis Greenberg to Velikovsky, 8 June 1974, IVP 79:14.

56. C. J. Ransom to Steve Talbot, 26 January 1975, IVP 92:4.

57. S. Talbot to Lynn E. Rose, 30 December 1974, IVP 93:1.

58. Thomas L. Ferré to S. Talbot, 10 March 1972, IVP 77:4; and S. Talbot to Ferré, 15 March 1972, IVP 77:4. For the legal proceedings, see letter from lawyer Scott McArthur to S. Talbot, 17 March 1972, IVP 77:4.

59. Quoted in Gillette, "Velikovsky," 1060.

60. Lewis Greenberg to Velikovsky, 29 January 1975, IVP 79:14.

61. C. J. Ransom to S. Talbot, 26 January 1975, IVP 92:4.

62. S. Talbot to Lynn Rose, 30 December 1974, IVP 93:1 (emphasis in original).

63. Velikovsky to Eddie Schorr, 19 May 1975, IVP 96:1.

64. Table of contents of *Chiron: Journal of Interdisciplinary Studies* 1 (Winter-Spring 1974). Winter 1974 also saw the appearance of volume 1, number 1, of *Chiron: The Velikovsky Newsletter*, which offered Velikovskians news of recent events. This folded equally quickly.

65. Lewis Greenberg to Velikovsky, 29 December 1974, IVP 79:14.

66. Robert Hewsen, preface to Alice Miller, *Index to the Works of Im-*

manuel Velikovsky, vol. 1 (Glassboro, NJ: Center for Velikovskian and Interdisciplinary Studies, 1977), i. See also "A Focal Point," *S.I.S. Review* 1, no. 3 (1976): 17-18; and Jueneman, *Velikovsky*, 52-53. Here is how Hewsen characterized the venture to Velikovsky: "I would say, then, that my role in the Center, of which I am the Director, will be largely organizational. It is our goal to make your work better known, to give it publicity, and to stimulate its discussion. . . . To accomplish this aim the Center, as proper with an academic institution, cannot and should not take a *public* stand for or against your views" (Robert Hewsen to Velikovsky, 17 April 1975, IVP 81:12). Kronos Press, based in Glassboro, also published several books, such as an un-Velikovskian initial publication, H. C. Dudley, *The Morality of Nuclear Planning?* (Glassboro, NJ: Kronos Press, 1976); most of their publications, however, referred to Velikovsky prominently, such as Miller's *Index*.

67. Lewis Greenberg to Velikovsky, 29 December 1974, IVP 79:14.

68. *Kronos* 1, no. 1 (Spring 1975): inside cover.

69. *Ibid.*, 64n.

70. Velikovsky to Lewis Greenberg, 5 June [1975], and Greenberg to Velikovsky, 9 June [1975], IVP 79:14.

71. Donald H. Menzel to Stephen L. Talbot, 13 May 1975, IVP 124:2.

72. Donald H. Menzel to Frederic Jueneman, 23 July 1975, IVP 124:2.

This was in response to Jueneman to Menzel, 16 June 1975, IVP 124:2.

73. Warner Sizemore to Velikovsky, 5 October 1975, IVP 97:10.

74. Jerry Rosenthal to Velikovsky, 28 June 1977, IVP 94:2.

75. This was Lewis Greenberg, ed., "Velikovsky and Establishment Science," special issue, *Kronos* 3, no. 2 (November 1977).

76. Jerry Rosenthal to Lewis Greenberg, 10 March 1978, IVP 94:2.

77. Erich von Däniken, *Chariots of the Gods? Unsolved Mysteries of the Past*, trans. Michael Heron (1968; New York: Berkeley Books, 1999), 75 (quotation), 158. On sales figures, see Kenneth L. Feder, "Cult Archaeology and Creationism: A Coordinated Research Project," in *Cult Archaeology and Creationism: Understanding Pseudoscientific Beliefs about the Past*, exp. ed., ed. Francis B. Harrold and Raymond A. Ewe (Iowa City: University of Iowa Press, 1995), 34-48. For a critique of von Däniken's theories, see William H. Stiebing Jr., "The Nature and Dangers of Cult Archaeology," in Harrold and Ewe, *Cult Archaeology and Creationism*, 1-10.

78. Ben Bova, "The Whole Truth: Editorial," *Analog* 94, no. 2 (October 1974): 8. See also the vehement dissociation of the two in Ransom, *Age of Velikovsky*, 238. Interestingly, the most systematic investigation of Velikovsky's sources concluded that von Däniken was *more* careful with his evidence than Velikovsky: Bob Forrest, *Velikovsky's Sources*, vols. 1-6 (Manchester: printed by author, 1981-83), 1:5.

79. Erich von Däniken, *Remnants of the Gods: A Visual Tour of Alien Influence in Egypt, Spain, France, Turkey, and Italy* (Pompton Plains, NJ: Career Press, 2014).

80. Hal Lindsey with C. C. Carlson, *The Late Great Planet Earth* (1970; New York: Bantam Books, 1973).

81. On both strands of 1970s evangelical spirituality, see T. M. Luhmann,

When God Talks Back: Understanding the American Evangelical Relationship with God (New York: Alfred A. Knopf, 2012).

82. Daniel Wojcik, "Embracing Doomday: Faith, Fatalism, and Apocalyptic Beliefs in the Nuclear Age," *Western Folklore* 55, no. 4 (Autumn 1996): 297-330; and Andrew J. Weigert, "Christian Eschatological Identities and the Nuclear Context," *Journal for the Scientific Study of Religion* 27, no. 2 (June 1988): 175-91.