

CHAPTER THIRTEEN

THE EMPIRE STRIKES BACK

The asininity of the attacks by the science media and conventional scientists upon Velikovsky was consistent with book reviewing and editorial practices generally. Sympathizers of V. had an ample data bank from 1963 onwards from which to demonstrate that V.'s critics were brash, dogmatic, imitative, narrow, selective, unprepared, precipitous, vulnerable, incomplete, pretentious, possessed, unversed, unserious, unselfcritical, prejudiced, unsystematic, inexact, unphilosophical, ideologically scatomatized, vague and irrelevant — to say the least. Yet withal Velikovsky was said to have been "buried" not once but repeatedly, and all of his supporters with him.

In a field so broad, hundreds of major statements and thousands of details offered in over a thousand published pages somehow emerged unscathed. Several scores of statements were indicted for ambiguity or rendered more doubtful. What everyone knew ahead of time could be reasserted: the prevailing theory of celestial mechanics would only make nonsense out of the data presented. In addition, planet Venus probably lacks massive clouds of hydrocarbon; if so, either such clouds were never there or they burned off over time, the latter being V.'s second line of defense.

All in all, this was so small a bag that V., when it came time to write his address to the San Francisco AAAS meeting, ended it with the words, "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." He knew the last expression was bravado, but he felt like sticking it in, so unsuccessful did he consider his opposition to have been. He asked Deg's opinion: should it stay? Deg was happy for the swashbuckling septuagenarian. Besides there was enough truth in it to let it go as the last firecracker of a speech that crackled throughout; Why

not? Fling it in their teeth. And so it stands. Since effectively it says nothing and says all, who can object to it?

I have given much thought to what kind of review might be tendered V.'s books, such that his supporters could not assail on substantial or moral grounds but would not please them. I consulted Professor Joseph Grace, a historian of science, and he kindly wrote a review for our pages, holding to a 700 word limit, such as is common.

"Velikovsky is a highly skilled and erudite scholar, who works comfortably in several major fields of science and the humanities. He has a style, an attack, that is primarily humanistic. By this I mean to exclude social science, which today has a format often resembling natural science, complete with jargon. He writes more like Ignatius Donnelly, a predecessor of a century ago, whose style is even more pleasurable. There can be only mild objections to such a style, considering the undefined and exotic, even occult nature of some of the areas he must venture into and the non-existence of a scientific language covering so broad an area. Of course, we would lose much in clarity and orderly communication if our students were to adopt it in all manner of writing.

Velikovsky sees prehistory and protohistory as frequented by stupendous natural catastrophes that call into question the stability of the solar system over long time periods, and therefore the gradualism of darwinism in biology. His evidence is limited and fragmentary, much of it anomalies that puzzle historians both human and natural. Most of his evidence must, and does also, serve conventional approaches, our received knowledge, although he insists upon viewing it as catastrophic.

His most radical hypotheses, which he expresses far too confidently, propose drastic erratic movements and changes of planets, particularly the Earth, Mars and Venus, not to mention the lunar satellite and the giant planets Jupiter and Saturn. The mechanics, even the electro-mechanics of such allegedly historical events are, if conceivable, quite unknown and undeveloped.

Here and there in his works one finds nuggets of valuable ore, some in history, some in legend, some in natural history. One finds these days a plenitude of studies of meteorites and comets, a few of which he cites. One finds, too, many good works on historical and stratigraphic chronology, and it takes more than innuendo to shake the solid foundations of radio-chronometry. One must be impressed, on the other hand, by Velikovsky's ability to discover anomalies and contradictions, especially in Ancient History. He may well be on the right track in discovering continuities between Pharaoh Akhnaton and Oedipus, and concordances between the Biblical Amalekites and the Hyksos conquerors of Egypt, and even is stressing a baffling absence of archeological material to fill in centuries of assigned time in Egypt, Greece, and elsewhere.

The reader will find many entertaining and suggestive pages as well. As

for his general ideas, practically none of them can be fitted into contemporary scientific theory. The more heretical a theory, the more hard evidence must be found to support it, and Velikovsky's ideas of an electrically run universe, which he never develops, and his claims of planetary aberrations in early times, to which he gives a great deal of attention, are, to put it mildly, bizarre; there exists, that is, no astrophysical theory to support them.

I would not recommend his books to anyone. Their pretensions will enrage the learned and confound the ordinary reader. Every age has books like them. I can mention Donnelly and Mesmer in the nineteenth century and George M. Price and C. Beaumont in this century, but there were many more, which are best forgotten. The genre is well known to science and historians of the most ancient times, and one can judge the future of the books by what has happened to their predecessors.

The fact that a great many people read such works tells us little about their value as science or literature. No doubt, in time, such scientists as can be spared from other tasks or are involved with his specific hypotheses will build up what would amount to a total assessment. It is certainly too early to assert, as Prof. A. de Grazia did after only a dozen years, that he is one of the great cosmogonists of the century.

What can be said for this review is that it gives a general impression of what is talked about in the books and how, and it does not challenge their right to be published, nor dismiss them as anti-scientific, nor berate the author.

When researching on the Velikovsky Affair, Deg stimulated V.'s interest in the techniques of suppression, putting into a framework the host of items which protruded from V.'s archives. Deg told V. of a favorite old book, Henry Thouless' *Straight and Crooked Thinking* and explained how it might be applied to V.'s experience. V. was excited by the idea and prepared a handwritten list of "70 ways of suppressing a theory," which the two men discussed. The list that follows is largely in V.'s words and idiom. It was not included in the published work. Each item is based upon one or more concrete instances that can be documented and dated. Later on V. wished to engage Lynn Rose in fleshing out and publishing the list.

Actions of Established Scientists
and Cohorts Aimed at I. Velikovsky and his Book
Worlds in Collision (1950)

1. Refusal to read or examine the manuscript.
2. Charging it was not presented to specialists before publication.
3. Refusal to help with inexpensive tests through established facilities.
4. Accusation that work was not offered for testing.

5. Assertion that work has been disproved by tests.
6. Efforts to discourage printing.
7. Demands for censorship.
8. Engaging in censorship.
9. Boycott of the book.
10. Boycott of all textbooks of the work's publisher.
11. Threats of reprisal against publisher by not offering manuscripts or withdrawing books.
12. Threat against associated publishers without text books.
13. Appeals to the scientific community.
14. Efforts to influence reviewers in advance.
15. Appeals to mobilize hostile reviewers.
16. Efforts to suppress favorable reviewers.
17. Efforts to supplant regular reviewers with volunteer authoritative writers as reviewers.
18. Checking the allegiance of scientists and officials of scientific organizations.
19. Firing of unaligned scientists and officials.
20. Punishment of book editors and firing.
21. Demand that there be a public recantation by publishers.
22. Refusal to print author's papers about his books in scientific magazines.
23. Return of supplementary papers unceremoniously without reading.
24. Refusal to reprint answers to distortion of facts in reviews.
25. Misquotation from the book, and quotations out of context.
26. Copying of wrong figures into a quotation used in the book.
27. No correction of erroneous statements in reviews by anybody in the scientific community.
28. Use of knowingly false argument.
29. Dogmatic statements and accusations.
30. Setting up and knocking down "strawmen."
31. Dishonest rejoinders.
32. Defamation and discrediting abuse.
33. Promotion of antagonistic critics.
34. Appeal to religious feelings.
35. Guilt by association.
36. Treating work by association with other ridiculed or denounced books.
37. Use of fallacious statistical method to decide whether a genius or crank wrote book.
38. Writing reviews and criticisms without reading the book.
39. Copying from other reviews (even of those who had not read it themselves).

40. Innuendos that unneeded counterarguments abound.
41. Refusal by scientific periodicals to advertise the work.
42. Warnings against readers' inability to judge work.
43. Assuring the reading (and book-buying) public the book is dull and worthless.
44. Accusing author of using methods not actually used.
45. Denials of acts of suppression, compounding perjury.
46. Omission of credit or of footnoting the work when offering "new" theories elsewhere that are contained in the book.
47. Refusal to give credit for discoveries confirmed ultimately in tests.
48. Refusal of information to author.
49. Refusal to engage in communication with author or allies.
50. Suppression of news of disputes or debates won by author.
51. Deprecating value of crucial tests favoring author's theories.
52. Concocting stories that "1000 wrong predictions" were in book.
53. Defamation in letters and intimidation of potential support.
54. Use of great names (e.g. Nobel Prize winners) for defamation.
55. Whispering campaign; private letters.
56. Intimidation of students, both undergraduates and graduates.
57. Elimination of the name of the heretic from books of reference.
58. Removal of the book from libraries.
59. Demands to place the book on the Register of Forbidden Books.
60. Pressure on scientific supporters by bribing with better jobs to abstain.
61. Grants given to disprove the book (no grants ever given to "prove").
62. Efforts, include fabrication, to show misuse of sources by author.
63. Damaging statements put in the mouth of deceased persons of influence.
64. Heaping of accusations without substantiation in quantities making any response impossible in the same media.
65. Insinuations of profiteering and other ignoble motives for writing the work.
66. Attempts at organizing character assassination and special meetings to dispose of the challenge.
67. Dissemination of selected damaging reviews.
68. Offering the readers arguments from specialized fields that they are unable to verify.
69. Generalization and complete disapproval on grounds of a single alleged error.
70. Accusation of lack of sources by misrepresenting the term "collective amnesia."

A service to the history and science of science would occur in the expansion and testing of the list. Deg wished that he might complete the list concerning V., then move to other cases in science, and then to all occupations to display the universal prevalence of misdemeanor, not so much to scandalize, nor to stop it all (an impossibility), as to expose to light the epidemic predicament.

When asked to place them into categories (for Deg was distressed by their stringing out aimlessly) V. divided them into: suppression of publication; punishment and rewards; examination of the theories refused; ostracism of a nonconformist; rewriting of history and scientific finds; control of criticism; unfair criticism; and unfair criticism continued by unfair rejoinders. Deg in his turn divided them into logical errors, moral offenses (cheating and dishonesty); factual errors; illegitimate demands; hyperbole; personal abuse; material sanctions; etc. V. was especially pleased with what Deg called "the absent footnote technique," which with disastrous effectiveness eliminates an undesired line of ancestors, such as V.

Stecchini in the 1970's pointed out that Schiaparelli was a leading astronomer but could not get acceptance of his idea that Venus was scarcely rotating in relation to the Sun, showing an "Earth-Lock" as it comes closest to the Earth. The "Earth-Lock" was proven a century later, but although it supported V.'s view of a young and closely Earth-related history, other reasons were sought for it and V.'s position was not even mentioned, when, for example, the *Encyclopaedia Britannica* (XIX, 78) connected the phenomenon with "unsolved but very significant celestial mechanical problems connected with the origins and early histories of the planets." Here is a case of partial incorporation of quantavolution with the help of the "absent footnote technique."

The tricks used against V. were all commonplace in the scientific world. Since his work was so widely publicized and since he collected evidence so carefully, the tricks were simply more completely displayed. The more basic causes of resistance and opposition, which spawn tricks, have been discussed by Bernard Barber, with a wealth of examples. V. was not a sociologist. Allegations of meanness and non-rational thought exhausted his repertoire of analysis, except for his handy notion of collective amnesia of ancient catastrophe, which, he began to think, was the essential cause of the opposition to his theories; people, including scientists, could not bear to admit to open discussion their own suppressed terror of the original events.

But, of course, resistance to new ideas occurs whether the new ideas are catastrophist or uniformitarian, and with ideas that are false as well as with very true ideas, which Barber has shown in the cases of Helmholtz, Planck, and Lister, among others. As Deg has argued, the great fear of the poly-ego in the normal schizoid human determines memory at the same time as it demands forgetting (or resisting memory), and ancient catastrophes were materially grafted onto this human mechanism; but the resistance to V.'s theories can be only slightly assigned to the peculiarities of his catastrophism.

Deg prepared another list in 1978. He was making up this one out of disgust with politics: he was gloomy over the practical impossibility of finding persons in the world who were capable of organizing, agitating, and contributing to beneficial and benevolent movements. But he saw that the list applied also to getting support for scientific ideas and movements.

"Why Doesn't Somebody Do Something?"

Noone wants to follow
 Helplessness
 Hopelessness
 Incompetence
 Hardheadedness
 General Disbelief
 Indifference
 Too busy, no time
 Can't afford to, financially
 Hurts somebody
 Meets opposition
 Arrogant to tell someone what to do
 Timidity
 Fear
 Fickleness
 Inattention and distractedness
 Leave it to the experts
 The crazies you have to deal with
 Hard work
 Resentment against being ordered about
 Ignorance of particulars
 Disbelief in use of force or any form of manipulation
 Hatred of those to be helped
 Lack of foresight
 Interested only in the moment
 Can't believe a few voices might prevail
 Things will work themselves out (laissez-faire)
 Fear of being corrupted
 Distaste for manners of other activists
 Have to work with inferiors
 Suspicious of potential collaborators
 Fear of physical harm
 Fear of failure
 Fear of being responsible for effects
 No wonder nothing ever gets done!

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In 1978, Dr. Henry Bauer, later Dean at Virginia Polytechnic Institute, offered the first full-dress anti-Velikovsky manuscript and the Director of the University of Kentucky Press asked Deg to read it with reference to its possible publication. Cutbacks in funds and programming forced the Press into giving up the manuscript or finding a \$5000 subsidy of its production. The University of Illinois Press was finally to have brought the work out in late 1984. Meanwhile one can have a review of it by way of Deg's Readers

Report of January 10, 1979:

To: University of Kentucky Press, Attn. Mr. Crouch

From: Professor Alfred de Grazia

Subject: Reader's report of Henry H. Bauer, *Beyond Velikovsky*

In my opinion, Dean Bauer's manuscript should be published. It is the first generally adverse criticism of the work of Immanuel Velikovsky by a single author. The author has researched practically all available public sources. He is aware of and also adversely critical of the failings of many of the critics of Velikovsky. The book, strangely, is a likable book, which probably reflects the author's character more than the contents, which must prove annoying to a hundred people.

The book will be controversial. There is no avoiding this. Feelings run high on the scientific and sociological aspects of Velikovsky's work. The most incisive criticism is bound to come from the supporters of Velikovsky, for they are much better informed on all aspects of the controversy than the opponents of Velikovsky. These latter are usually cut down quickly. Dean Bauer realizes, though, that it is not easy to address the issues, and has the advantage of four hundred pages to explain himself and balance his analysis.

Because of the scope of the book, not only Velikovsky but also a number of his supporters will be motivated to respond. And one cannot doubt that they will have good grounds to enter the fray. Let me take myself as an example of what may very well happen with others. On p. 236 the author mentions my "utter conviction that Velikovsky is right." Right about what? I am favorable to his general theories, his genius, and his defense against the almost invariably misplaced attacks upon him. Bauer might well stress his distinction between the "True Believers" and the scholarly supporters. Among the latter, there are many differences, the atmosphere is highly critical and, if they seem overprotective of Velikovsky, it is because the enemy outside is so massive and aggressive. It will add greatly to the clarity of the analysis if the author distinguishes the scholarly supporters and the lay supporters. (The word "public" is better but unfortunately has several meanings.) The scientific opponents of Velikovsky have also their scholarly and lay supporters. As for disputes among the scholarly supporters and Velikovsky, contrary to Bauer's statements, there are dozens, beginning with Juergens, Hess, and Stecchini and ending with the young writers in the current (Nov. 1978) issue of the *Society for Interdisciplinary Studies Review*.

At the bottom of p. 237, Bauer shoots from the hip at both Juergens as an absurdity and myself as a political scientist, while favoring physicist Kruskal's scornful attack upon Juergens. This does not accord with Bauer's many comments upon dogmatic remarks and against extolling specialized authority. Apart from whether he understands Juergens's theory, which he

does not bother to demonstrate, and whether I understand Juergen's theory as well or better than Kruskal, he takes up a vulnerable position: what qualification, one might ask, does Bauer have for writing a book of sociology, history, ethnology, and political analysis, not to mention meteorology, geology, astronomy, etc.? Does he regard himself as a greater polymath than any of us?

Then again, he contradicts my analysis of Margolis and a group of Yale reviewers, claiming that his own count in the first instance is at odds with my own. Perhaps he should reproduce, in a couple of pages, the Margolis article with my comments, adding his own. Such would be the better way to damage my conclusions. The readers might then judge.

And so on. To say only of the distinguished group of scholars who passed on the *ABS* special issue on the Velikovsky Affair that none was a scientist gives a completely misleading idea to the reader. Lasswell was one of the founders of quantitative method in behavioral science; Cantril was a distinguished psychologist and opinion analyst; etc. Nor does he stress that Harry Hess, who is sometimes regarded as having been the leading geologist of the past generation, was a thoroughly sympathetic friend of Velikovsky. Hess and I talked on two or three occasions of Velikovsky, and Hess was as eager as I to see Velikovsky's scientific ability respected. Hess recommended that his students at Princeton read *Earth in Upheaval*, for example. These are but a few of the hundreds of points of contention in the manuscript and yet I feel it should be published with only modest changes, because it might otherwise take years to redo it and I am not at all sure that the public functions of the book would be greatly assisted. Perhaps I am saying that the book as it stands invites a full rocket display and, in the process, the public, science, and students will become better educated. I doubt that any amount of revision will make it a definitive and conclusive answer to the rapidly developing body of work sympathetically or willy-willy aligned to Velikovsky's books. I have four books in process myself that are more controversial and upsetting to the established doctrines of contemporary science than those of Dr. Velikovsky. But I have the impression that I shall not encounter the same type of opposition as Velikovsky if only because the intellectual atmosphere has changed so much and in part because of the Velikovsky Affair.

Readers perhaps will little note the criticism directed at myself and some others in the book, but they will be alert to a number of points respecting Velikovsky, and I would suggest that Dean Bauer reconsider them. He is attacking Velikovsky in 1979 partly on the basis of a pamphlet that Velikovsky published in 1946 ("Cosmos and Gravitation") and which Bauer even appreciates is not pushed by Velikovsky himself or scarcely anyone else. True, Velikovsky hates to recant, but the pamphlet is not a necessary prologomena to the later books. Indeed, Bauer's often insightful views about Velikovsky's character and motives should make him wonder whether the pamphlet was not merely a brash preliminary exercise, which

vanity demanded be published as advance claims. Further it has become fashionable now to predict the doom of the concept of gravitation, and Velikovsky's musings were in a way the fashions worn in 1946 for anti-gravitational thought. This might be said also regarding the model of the atom as resembling the solar system. Only lately has that idea become discredited. Are we to dump all scholars who early in their careers exhibited what was currently believed? Then everyone will have to walk the plank.

Bauer sometimes abuses Velikovsky, contrary to his professed aim, generally observed, of avoiding inflammatory and *ad hominem* statements. It should be easy to revise such expressions as "astonishing ignorance" (p. 159), "supreme ignorance" (p. 154), p. 161 etc. I think that he would reap rewards if he, or an editor, were to erase fifty to a hundred non-functional adjectives or phrases.

And, in respect to Velikovsky as a knowledgeable scientist, aside from "who is a scientist besides the self-elect," Bauer underestimates Velikovsky totally. Let him ask Burgstahler (chemist), Motz (astrophysicist), someone like myself who knew Hess (geology), Hadas (linguistics), Lasswell (psychiatric psychologist), Cyrus Gordon (Near East studies), Einstein (physics), Juergens (electricity), *et al.* Every last one will or would say that Velikovsky is not only a good scientist, but an imaginative one, and at home in a number of fields. I wonder why Bauer did not take the step to include himself in this group by interviewing the subject of his book. Velikovsky may be in error, but he is a scientist.

Also, I would recommend dropping the discussion of whether Velikovsky is a crank. Bauer admits that he himself is a crank, about the Loch Ness monsters. It's unworthy of this book to waste itself on this unscientific concept. I would, as Dean Bauer appears to believe, devote only several necessary paragraphs to exposing the term "crank" and kicking it out of bounds.

On p. 248, I note a striking contrast between a group of pro-Velikovsky publicists and a group of anti-Velikovsky scholars of distinction. This is a "foul blow." Either let both be publicists or both be scholars.

So, I should conclude that the off-hand abusive terms ought to be excised since they take away from a book some of its good air of casual and pleasant inquiry. Cut back the section on cranks. Perhaps dispense with the sections on "Cosmos and Gravitation" save for a simple statement of its inappropriateness and its inelegant foreboding of things to come. The admirably clear piece on gases should win Bauer an excellent contract for an elementary textbook in general science, but may not belong here. Perhaps other paragraphs can be removed here and there at the instigation of a generally well-educated lay reader.

The style is clear at the college level. Many, many things are said that need to be said about both sides: about how scholars are just (simply) people; about how the general public reacts to controversies in science as to

political struggles, baseball games, etc.; and about the foibles of Velikovsky (though perhaps not enough, regrettably, about how these foibles have had something to do with driving him on relentlessly and with good effect). And I think that Dean Bauer might even, in the end, bite the bullet and state that on the whole it were well that Velikovsky's books were published, then bad that they were mishandled by the press, scientists, and disciples, yet good that a million people began to read into history and science. Finally take the word of the author himself (p. 366) that an astronomer's statement that "Velikovsky's scenario was impossible on grounds of celestial mechanics was just not so." That is worth something and will win the author a medal for courage, after all is said and done.

To avoid rumor-mongering or a delayed denunciation Deg told V.'s retainers of the existence of the work and of his recommendation. "Why?" he was asked, meaning why didn't he stomp it. It's not bad, he answered, you'll see, and it will keep the dialogue going, even improving it.

Meanwhile, those who were termed by the anti-heretics "devotees," "followers," "disciples," "supporters," "sympathizers," and were consigned to the limbo of science as "benighted," "anti-scientific," "occultists," "astrologers," "fanatics," and so on, unendingly — from these who were seriously considering his work as well as doing work of their own, came the discovery and reporting of his errors, qualification of his statements, essays at quantification, adduction of contrary materials, tempering, amending, and explaining. We need not go into the question, "Whose mass of supporters is better — yours or ours?" We are saying precisely that the effective scientific criticism of Velikovsky came from those who were sympathetic to his work.

It was the heretic scholars who designed alternative scenarios, in geology and astronomy, who upset V.'s chronology beyond the Eighteenth Dynasty of Egypt, who pointed out correctly evidence of pro-Biblical bias, who disputed his identification of the astronomical bodies implicated in certain legends, who pinned down the sources of numerous uncertainties, who reduced vagueness, who found and accommodated predecessors in the esoteric and difficult literature of catastrophism, far beyond the sporadic dark hints that "nothing new" was being proposed.

To be blunt, if you want to know what's wrong with Velikovsky, ask his friends, as much as his enemies; ask his admirers, as well as his detractors. You must know the literature of quantavolution and catastrophe. It is contained by now in many books and hundreds of correctly postured articles, many old, many new, many forthcoming. One can think no longer, if ever, that by "not believing in Velikovsky" science will proceed on its customary paths; a growing parade of many different kinds of quantavolutionaries is finding its own paths. The parade cannot be dismissed by uttering an imprecation against Velikovsky.

* * *

The *Bulletin of Atomic Scientists* had been established in the triumphant days of nuclear physics following the blast at Hiroshima and was dedicated to voicing the responsibilities felt by scientists. But after a time it began to lose its halo and was seeking a larger audience. Like the playboy college student who excused his poor grades on grounds that his college was anti-semitic and who persuaded his father that his nose, his curly hair, and his name ought to be changed, whereupon, his grades remaining poor, he had to confess that "us Gentiles ain't very smart," the *Bulletin* did change its name for awhile and had the same old problem so it changed it back again, but at this time, around 1964, was trying to boost its popularity by exposing what Editor Rabinowitch regarded as scientific impostors, and his chosen weapon, a science publicist named Margolis, settled upon Velikovsky, whence was published a cavalier article entitled "Velikovsky Rides Again."

Deg's larger and more detailed refutation of the offensive article is reproduced in *The Burning of Troy*. So here I may introduce a letter in the same vein from Eric Larrabee, a publicist and early supporter of V., later head of the New York State Arts Council.

April 21, 1964

To the Editor:

The "Report from Washington" by Howard Margolis in your April number is a mixture of intemperate accusations and misstatements of fact. Margolis dismisses as "hokum" the work of Immanuel Velikovsky, which he has demonstrably read without care and judges without experience. He claims there is "no scientific way to examine" books which abound in references to physical fact. Their author had furnished specific scientific tests of his theory and on all of them to date, according to Professor H H. Hess of Princeton, he has been vindicated. Margolis brushes off Velikovsky's successful predictions as "science fiction" and offers instead the results of his "few hours" reading in philology and history.

He can apparently read neither French nor Hebrew. If he could read French he would not speak of the "actual" inscription at el-Arish in words from the outdated English translation of 1890 instead of the modern French translation of 1936, which is plainly cited in Velikovsky's footnote. The French translation gives the name Pi-Khirote. Margolis is flatly wrong in stating that Velikovsky "alters" the text, either here or in the case of the biblical Pi-ha-hiroth (so spelled by Velikovsky in *Ages in Chaos*, p. 44). If Margolis had read even the English translation attentively he would have found "King Tum" (the French gives "*le roi Toum*"). This is the text: "*Voici que Geb vit sa mère qui l'aimait beaucoup. Son coeur (de Geb) était négligent après elle. La terre _____ pour elle en grand affliction.*" It goes on to describe "upheaval in the residence" and "such a

tempest that neither the men nor the gods could see the faces of their next." The inscription is shown to be historical by the fact that the King's name is written with the royal cartouche.

Velikovsky's reasons for suggesting that *bkhor* (firstborn) in the Hebrew text might be a misreading for *bchor* (chosen) are given at length (*Ages in Chaos*, p. 32-34) and are not essential to his argument that Exodus and the Egyptian sources refer to the same natural catastrophe. He uses the word "obvious" in proposing that the phrase "to smite the houses" refers to an earthquake in view of the fact that Eusebius, St. Jerome, and the Midrashim all confirm this interpretation. Margolis' sarcastic repetition of the word "obvious" is wholly without justification.

Margolis accuses Velikovsky of saying that St. Augustine puts the birth of Minerva at the time of Moses whereas Augustine "says the opposite." This would be a serious charge if true but it is doubly untrue, both as to Augustine and Velikovsky. The relevant passage in *The City of God* (Book XVIII, Chapter 8) reads that Minerva was born in the time of Ogyges and Velikovsky quotes it (*Worlds in Collision*, p. 171) in those precise words. In support of the damaging assertion that Velikovsky alters evidence, Margolis alters the evidence from both sources.

Margolis cannot even read Velikovsky correctly. He says that Velikovsky "can cite no description" of Venus growing larger in the sky despite the fact that on pages 82-83 and 164-65 of *Worlds in Collision* it is so described from Western ("an immense globe"), Middle Eastern ("a stupendous prodigy in the sky") and Chinese ("rivalled the sun in brightness") sources.

The sociological interest of the Velikovsky case lies in the willingness of scientists to dismiss the work of a serious scholar as "hokum" on the basis of slipshod, inaccurate, and abusive criticism. Margolis has proved once again that the interest is justified.

Eric Larrabee

Deg was in an ornery mood and had threatened the *Bulletin* with a suit for slander. V. was all for the idea and consulted his friend, the libel expert, Philip Wittenberg. Deg also consulted Herbert Simon and adopted Simon's view, as expressed in the letter below:

Dear Al,

I have read the materials you sent me about the Velikovsky matter. (Incidentally, I lunched with Velikovsky last week, and we are going to have him back to the campus next autumn for a lecture.) I have a few comments to offer on the matter of strategy.

As I am sure you know, there is a doctrine in the law of libel known as "invitation to comment." Anyone who performs publicly — and that includes publishing a book — invites critical comment, and has no recourse if he gets it unless he can show actual malice. The critic does not, in general,

have to sustain the burden of proving truth. (I may have forgotten details, but your lawyer will tell you that that is the general idea.) Two consequences follow from this: (1) one should not publish books — or issues of the American Behavioral Scientist devoted to the Velikovsky Affair — unless one has a thick skin; (2) when one is flayed by a critic, one should almost never threaten legal action, however righteous one's feelings.

The opponents of Velikovsky are not malicious, they are indignant. Nothing about the Margolis article seems to me libelous, however much I disagree with it. We certainly do not want to imply that *we* wish to suppress his right to hold, or even publish, these opinions, however much anguish they cause us. Hence, if I were editor of the Bulletin of the Atomic Scientists, I would politely but firmly reject your request that I "withdraw my support" from the article. He might even point out that to an anti-Velikovskyite, some of the language in the September American Behavioral Scientist might seem quite as offensive as Margolis' language did to you. *C'est la vie*.

When you receive the refusal from the editor — as I am sure you will — I would advise that you then request an opportunity to have three pages in BAS to reply to Margolis (perhaps offering the same number of pages in ABS for a rebuttal to the September articles). There is nothing to be lost by a public discussion of the issues, especially the issue of freedom to publish, and nothing to be gained by defending that freedom through threats to suppress it.

With best regards,

Cordially yours,
Herbert A. Simon
 Professor of Administration
 and Psychology

After much deliberation and testing of the winds, Rabinowitch wrote Deg:

25 June 1964

Dear Mr. de Grazia:

In answer to your letter of May 12, I do not see why, and in what form, the *Bulletin* should "withdraw its support from the article of Mr. Margolis." I do not understand what you mean by "your contributors and advisors urging you to take action to remedy the wrong done us." The responsibility for the contents of the articles published in the *Bulletin* rest (sic) with authors of the articles. It must be obvious, of course, that the magazine cannot disclaim legal responsibility for any defamatory statements, but I do not see in the article by Mr. Margolis any statements of such

nature with respect to yourself or to the contributors of your journal. If all polemics over matters of scientific competence would end in court, this would be bad indeed for the climate of free discussion in this country. In our society, the enemies of evolution can call scientists, espousing this theory, ignoramuses, or heretics; the enemies of fluoridation can call the medical authorities supporting it whatever like names they might choose — short of character assassination — and the proponents of fluoridation can do the same to their critics. This is as political processes should be in a democratic society.

In his article Mr. Margolis, after dealing briefly with the astrophysical difficulties of Velikovsky's theory, expanded on the interpretation of ancient texts. From the point of view of the *Bulletin* the physical and astronomical evidence is crucial, and the considerations of what Velikovsky calls "experience of humanity," can only be subsidiary. Physical evidence is simpler and more unambiguous; while interpretations of old texts and hieroglyphic inscriptions is an inevitably tentative and often controversial matter.

Since Mr. Margolis brought up the paleographic evidence in his article, we must in all justice, permit Dr. Velikovsky (or a spokesman for him) to point out the errors, if any, in his argument. This should be done by someone with first-hand experience in the field — either Dr. Velikovsky himself, or even better, some independent recognized authority in Biblical history and ancient languages. We are willing to publish such a letter in one of the forthcoming issues (giving Mr. Margolis the opportunity of answering it, if he desires); but, we will then terminate the discussion, since Egyptology or Old Testament studies do not represent a field of the *Bulletin's* major interest.

As far as physical possibility of the events suggested by Velikovsky is concerned, I mention the names of Menzel and Shapley because I remembered that they did analyze Velikovsky's theories at the time of their publication. I would be glad to have any other recognized astrophysicist or geophysicist (including the Princeton and Columbia astronomers who have pointed out in *Science* the correctness of some of Dr. Velikovsky's specific predictions), to present in the *Bulletin* briefly what they think of Velikovsky's theory as a whole.

I believe it is a mistake to accuse modern science of intolerance to the theories which destroy its accustomed frame of reference and force it to revise its foundations. Einstein proposed a revision of Newton's conceptions of time and space; for a few years, there was some resistance of the type suggested by you, but it was silenced by Einstein's explanation of the precession of the perigee of Mercury, and his prediction of the bending of stellar light in the neighborhood of the sun. If the correct predictions by Velikovsky, pointed out by Hess and others, do not change the general rejection of Velikovsky's theories by scientists, it is because changes in the laws of celestial mechanics and revisions of well-established facts of earth

history, required by Velikovsky, are quite different from the subtle, but logically significant and convincing changes in the scientific world picture suggested by Einstein (as well as by Mac [sic] Planck, when he postulated the atomic structure of energy, or more recently by Lee and Yang when they postulated a physical difference between a right and left screw, object and mirror image). Modern science has learned to be open-minded to revolutionary suggestions, if they are brought up with strong scientific or logical evidence. Reluctance to go along with Velikovsky's *Worlds in Collision* is, in my eyes, evidence not of stubborn dogmatism of "official" science but of the physical and logical implausibility of his theories.

Your letter and its request misinterprets the position of the *Bulletin*. To conclude, since Mr. Margolis brought up paleographic evidence, fairness requires the *Bulletin* to give space to a letter disputing this evidence (provided this letter is not more abusive than Mr. Margolis' criticisms). If Dr. Velikovsky can suggest a recognized authority in astrophysics or geophysics willing to discuss his theory as a whole in the light of recent verification of some of his predictions, I would consider giving space in the *Bulletin* for a brief discussion of this kind.

It is in this spirit of scientific argumentation that the whole problem should be resolved.

Sincerely yours,
Eugene Rabinowitch
 Editor

During the next few weeks Deg drafted a brutal reply to Margolis's article and prepared a letter to accompany the critique. However and meanwhile, V., ever hopeful of access to and acceptance by the authorities of physics, prevailed upon Harry Hess to submit on his behalf to Rabinowitch an article he had prepared on his Venus theory in the light of new findings. It would serve as a counterweight to the Margolis article, without reference to the libertarian and legal issues involving the *Bulletin*.

In September Rabinowitch wrote to Hess, returning V.'s manuscript without having read it and saying, "the *Bulletin* is not a magazine for *scientific* controversies — except on rare occasions (e.g. in the field of genetic radiation damage) when they are directly related to political or other public issues... Neither is it the function of the *Bulletin* to provide an outlet for scientific theories not recognized by professional authorities in the field." He explained the Margolis article as an attempt to undo the work of "behavioral scientists" in aid of V. whom, he said, they "championed in the most violent way."

In October, the *ABS* published Deg's critique of Margolis, and Deg sent it to Rabinowitch along with the letter that he had drafted three months earlier.

November 12, 1964

Dear Mr. Rabinowitch:

Please permit me to answer frankly your letter of June 25, which asks *why* and *in what form* you should "withdraw your support from Mr. Margolis's article about us.

The *why* should be apparent in the attached analysis of Mr. Margolis' writing, entitled "Notes on 'Scientific' Reporting." This explains in detail the errors, the malice, and the legal offenses of Mr. Margolis. Unless you can by the use of evidence and reason erase those 54 notes, you are bound scientifically, morally, and legally to "withdraw your support."

In what form should you "withdraw your support"? You should "withdraw your support" by expressing in seven columns of space in your magazine (1) your acknowledgement of the excessively large number of factual errors contained in Mr. Margolis' article, and (2) your regret for the incorrect unjustified slurs upon the character and motives of Dr. Velikovsky and the contributors and editors of *THE AMERICAN BEHAVIORAL SCIENTIST*, together with your hope that your readers would join you in repairing in the course of time such damages as was caused by this article.

My present letter could now end, as might have your own at the same point. However, you go on to make further comments that require answer.

You say that it would be "bad indeed for the climate of free discussion in this country" if "all polemics over matters of scientific competence would end in court." I answer that "all polemics" are not at issue, but only *one* polemical action. (You are, of course, at liberty to universalize its meaning.) Moreover, "the climate of free discussion" that you mention has been clouded and cannot be logically cited as a reason for staying out of court. It is precisely to get people out from under this cloud that the law and courts are built. The courts enable an objective determination to be made of a matter in certain cases where free discussion is impossible. They permit and require the calling and interrogating of witnesses under just conditions. They prevent and remedy the abuses that you have presumably endorsed. The law of evidence and the rule of law, Mr. Rabinowitch, are the grandparents of the scientific method. They are not its antithesis.

You say that in our society, disbelievers in evolution can call scientists espousing evolution ignoramuses or heretics. You say enemies of fluoridation can call medical authorities supporting it like names and *vice versa*. You are defending your magazine evidently for assuming the privilege of such name-calling as opponents of fluoridation and evolution employ. Very well. Your readers must judge you for that.

"Character assassination", you say, is *not* permissible, however. The issue here is of course just that. I call to your attention the numerous instances, well-noted in the aforesaid memorandum on "54 ways", in which your magazine is guilty of character assassination, slander, and libel.

Your next paragraph is logically queer, for you say that the *Bulletin* is

largely concerned with the astrophysics of Velikovsky and not with the humanistic evidence. (I will not tarry with your incredible distinction between physical and humanistic evidence.) But then you go on to admit that the *Bulletin* reversed itself and abandoned its chosen field in this case. (Apparently, any and every policy can be reversed to get at Velikovsky. How true we were!) And you say you want to see the historical evidence argued. Argued — but not too much you state, for you have to get back to your major interests! Like fluoridation? Like UN affairs? Like scientific freedom? You may go back to your affairs, Mr. Rabinowitch, but not before we are done with the matter.

Now you would graciously permit Dr. Velikovsky or an "independent authority" of the classics to answer Mr. Margolis by a letter, to be followed by a reply from Mr. Margolis, and then *stop!* Two-to-one is bad enough. But how does Mr. Margolis deserve this reply? By his own expertness as a biblical scholar, specialist in ancient languages, and classical historian? I submit that this exchange might be equal and appropriate if I might delegate my daughter who is majoring in archaeology at Bryn Mawr to take up your invitation to reply.

A general appraisal of Dr. Velikovsky's theories in your paper would be a good idea, as you suggest, and I think you should find a set of scientists to make such an appraisal. I would not go to Drs. Menzel or Shapley, whose participation in the Velikovsky case, as documented in *Harper's* and *The American Behavioral Scientist*, has been most unbecoming. Your hazy remembrance of their posture is scarcely a firm basis for risking the reputation of your magazine and colleagues. Besides the balance of evidence has continued to shift between 1950 and 1964. Do read that document; you must take the time: you and your writers cannot decently continue to ignore all the factual record of the case.

Still, all of this is not the central point, which is the behavior of scientists, and you do well to return to it in your last two paragraphs. There you first say that modern science is not intolerant of unorthodox theories. This is not so; even the case you cite, Einstein, was in your own words victim of "some resistance" of the type the ABS described. But even if it were so *generally*, why would you unscientifically and dogmatically refuse to recognize an "unusual" case of resistance when it loomed before you?

How can you say that the actions taken concerning Velikovsky and his theories were tolerant? Please state one procedure, whose value you would defend, for the reception and consideration of new scientific material, which was followed by the leadership of science in the Velikovsky case. Show us that he was given one key to the kingdom. I believe, as you seek to do so, you will gradually eliminate from consideration all the decent and rational procedures that are supposed to govern the behavior of scientists. In the end you will either be indignant or a cynic. You will not be the Rabinowitch whose letter I am replying to.

I must end in laughter, which I hope you will forgive. For you conclude

by permitting Dr. Velikovsky to answer by letter "provided this letter is not more abusive than Mr. Margolis' criticisms!" I am not clear whether you are here defining the outer limits of abuse, or whether you suggest pursuing scientific truth by balancing two sets of slander.

Go back to my beginning, sir; you will find our two requests to be generous offers made in the veritable "spirit of scientific argumentation" that you appeal to.

Sincerely yours,
Alfred de Grazia

Dear Mr. de Grazia:

Thank you for your letter of November 12th. I can only add my appreciation that you published the full Margolis article in *The American Behavioral Scientist*. Your readers may judge.

Sincerely,
Eugene Rabinowitch
Editor

December 3, 1964

Dear Mr. Rabinowitch

We acknowledge your appreciation of our fairness. Does your appreciation mean that you, too, will be fair to us and present our rebuttal before your readers?

Sincerely yours,
Alfred de Grazia

The rebuttal was *not* carried by the *Bulletin*. A great many scientists had their prejudices reinforced at the expense of V., Deg, and the *ABS*. In the final analysis and many years later, Deg's indignation seems overdone, and it is doubtful that he ever had the intention of suing, but he was up to his typical game of driving home contradictions and pounding away at the basic homology between legal and scientific procedure. Furthermore, while discounting his rhetoric, I should also call attention to specific instances of the damage caused by irresponsible behavior in scientific circles tied directly to the *Bulletin* article: one on the matter of fluoridation, one an exchange between Urey and Deg, and two to be treated in chapter 15 on "The Knowledge of Industry" involving the Sloan Foundation, Moses Hadas, and a project of Deg in economics.

July, 17, 1966

Dear Professor de Grazia:

Since writing you earlier in connection with my review of "A Struggle With Titans," I have been reading the various documents cited in "The Velikovsky Affair."

One that particularly "struck" me was the article by Howard Margolis in the April 1964 issue of the *Bulletin of the Atomic Scientists* that you so ably dissected in the October 1964 issue of the *American Behavioral Scientist*.

What came as an even greater surprise, however, was the article written by Margolis about fluoridation in the June 1964 issue of the *Bulletin of the Atomic Scientists*. By failing to take note of published reports of toxic effects from fluoridated drinking water, he constructs a very favorable case for fluoridation and makes his opponents appear to have no scientific grounds on which to oppose it! Since you were able to show that Margolis is not a good philologist, I thought it might be worth pointing out that he also has not read the fluoridation literature very thoroughly. The major documents he cited to support his view are guilty of omission just as he is. The one that was prepared in 1955-1956 is hardly relevant to "current" findings, while the "Select" bibliography is no more than a compilation of proponent research, with virtually no mention of contrary results reported by others, especially in relation to clinical findings.

I realize your interests lie primarily in the area of the "sociological" aspects of a subject like fluoridation, but the strong scientific evidence against fluoridation has been kept so heavily suppressed that there is a close parallel to "The Velikovsky Affair." Our own local public library, I might add, has refused to accept or acquire a copy of "A Struggle With Titans" on the grounds that the standard reviewing media have ignored it —just as they are ignoring "The Velikovsky Affair"!

Sincerely yours,
Albert W. Burgstahler
 Professor of Chemistry
 The University of Kansas
 Lawrence, Kansas

June 2, 1964

Dr. Alfred de Grazia
 The American Behavioral Scientist
 80 East 11th Street
 New York 3, New York

Dear Dr. de Grazia:

I am sorry to see that you have gotten mixed up in the Velikovsky case. Velikovsky was a charlatan. There is just no doubt about it at all. It is not true that outstanding astronomers would not welcome a truly original man with constructive ideas. We would put him on the staff of the University of California San Diego. I do think that you should try to withdraw from this controversy as gracefully as possible and not continue it. I assure you that every physical scientist of my acquaintance will rise to defend the *Bulletin* against anything you do.

I am terribly concerned at present about the lack of control in scientific publication. Science had always been aristocratic. Not everyone could get his ideas published in effective journals. Articles to the scientific magazines have been carefully edited, and unless they conformed to reasonable scientific standards they were refused. Today anyone can publish anything. In the first place, very second-rate scientists can get jobs somewhere — with industrial companies, government agencies, the space program, etc. They all have their private printing press in the back room, namely a reproduction device. As a result, papers of all sorts are sent out. Also there are new journals springing up with no decent editorial control whatever. The result is an enormous amount of confusion. In fact, as I have stated and I now repeat, there is often so much noise that one cannot hear the signals.

With best regards,

Very sincerely,
Harold C. Urey

Deg's journal, June 29, 1964

...Velikovsky had palpitations last week. For several days his pulse was irregular. He has gone into a three day period of rest and is taking a little tranquillization by drugs. He has been travelling too much and spending too much time trying to direct strategy in his scientific defense. A letter I received from Harold Urey depressed him greatly. Identifying as he does with authority, V. is hurt when a Nobel Prize winner for chemistry refers to him as a charlatan. What can he be expecting? I have not been able to educate him to the sociology and political science of science. He believes in rationalism and that other experts only by odd mistake "because they haven't read his works," treat him so contemptuously and with hostility. V. wrote what he thought should be my reply. (Sometimes his presumption becomes arrogant.) It was a strange letter, full of pathos and humble remonstrance. I could not and would not use it. It is an interesting document about V. himself. It would do him no good even if I were to use it. Yet he was deeply perturbed when I informed him I was sending my own letter of reply. He claimed that his was a perfect letter, which he was proud of and felt must