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CATASTROPHISM AND UNIFORMITY

A Probe Into The Origin of the 1832 Gestalt Shift in Geology*

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"I think any argument from such a reported radical as myself," Charles Babbage wrote to the geologist Charles Lyell on May 3,1832, "would only injure the cause, and I therefore willingly leave it in better hands."

Charles Babbage (1792-1871) was Lucasian Professor of Mathematics (1828-1839) at the time, a dabbler in geology, theology and manufacturing, who had recently made an unsuccessful bid for a seat in Parliament. In 1837 he was to publish his *The Ninth Bridgewater Treatise*, an attack on the theology of the Anglican establishment, and in 1851 he was to carry the attack into the Tory camp in his *Reflections on the Decline of Science in England*, the purpose of which was to argue that wealthy Tory amateurs had a stranglehold on science policy and were discriminating against socially less well positioned scientists, who were more deserving of support.

Charles Lyell (1797-1875), to whom he was writing, had just published the second volume of his *Principles of Geology* (Volume 1, 1830; Volume 11, 1832; and Volume 111, 1833), a work written in support of political liberalism although ostensibly it was an objective work in science free from any political implications. In his letter of May 3rd to Lyell, Babbage was explaining why he would not write a favorable review of the book. Quite wisely, the Whig scientists, like Babbage, Lyell,

Scrope, Darwin and Mantell, did not want the public to know that what was being promoted as objective truth was little more than thinly disguised political propaganda.

The purpose of this paper is to explicate what Babbage means by the word "radical," and the word "cause," when he writes, as quoted above: "I think any argument from such a reported radical as myself would only injure the cause, and I therefore leave it in better hands." The first part of this paper investigates the political implications of early 19th Century Geology. The second probes the nature of Babbage's and Lyell's "cause," and the last part of the paper concludes with a discussion of the implications of this investigation for Velikovsky's theory of collective amnesia.

PART I

THE POLITICAL IMPLICATIONS OF EARLY 19TH CENTURY GEOLOGY

In 1807, Humphrey Davy wrote to his friend William Pepys: "We are forming a little talking geological dinner club, of which I hope you will be a member." Of the original thirteen members, four were doctors, one was an ex-Unitarian minister. Two were booksellers; another, Comte Jacques-Louis, had fled the French Revolution. Four were Quakers, and two - William Allen and Humphrey Davy - were independently wealthy amateur chemists. Only one, George Greenough, had any training in geology or mineralogy. He had paid a visit to the Academy at Freiburg some years earlier along with Goethe, but did not by any stretch of the imagination pursue the subject for a living. He was a Member of Parliament. Indeed, what is extraordinary about the London Geological Society is that none of the original members were geologists. "The little talking dinner club" as Davy put it was a club for gentlemen given to talk, not to hammering rocks.

The following year twenty-six Fellows of the Royal Society joined, including Joseph Banks, the President of the Royal Philosophical Society, and the year after the number of members had jumped to 173. The "little talking dinner club" concept became unfeasible; apartments were rented instead; there was

talk of publishing transactions, and Sir Joseph Banks, fearing that the Geological Society would soon grow bigger than his prestigious and ancient Royal Philosophical Society, 'resigned in protest. By 1817, only ten years after its founding, the Geological Society had more than 400 members, and in 1825 it was incorporated with a membership of 637.

The founding and early growth of the London Geological Society is noteworthy for a number of reasons. Earlier scientific societies, like the Royal Academy in France and the Philosophical Society in London, had a much broader base. There had been a few abortive attempts to start specialized scientific societies in chemistry and botany, but they had come to nothing. The Geological Society of London was really the first specialized scientific society and its early growth was unprecedented, and, in fact, very difficult to account for, especially when one recalls that its early members were almost all doctors, lawyers and Members of Parliament instead of persons actively engaged in what we would now consider to be geological pursuits. Of the first Presidents (Greenough, Buckland, and Murchison), George Greenough was a Member of Parliament, the Reverend William Buckland was Dean of Westminster, and Sir Roderick Murchison was an independently wealthy retired Army Officer.

That is not to say that there were no persons in England actively engaged in what we would now consider to be geological pursuits, for indeed, England at the time was going through a crash program of canal building and mine exploration and was about to enter the railroad age, but one is hard-pressed to find these working geologists on the membership list. William Smith, for instance, the most famous drainage engineer of the age, who discovered the technique of correlation of strata by means of fossils, and is generally mentioned in modern geological texts as the key geologist of the era, was not invited to join the London Geological Society. Perhaps he was too busy doing geology to have time to talk about it, but if the truth be told, the London Geological Society was a group of talking amateurs whose interest in Geology was not for its application to mining and canal digging, but for its theological and political implications, which were crucial to the social stability of England and were

thereby by no means irrelevant to the early development of geology.

The term "geology" had only recently been introduced by the Swiss Diluvialist, de Luc. In the Medieval University curriculum one finds no place for the study of the earth, which was deemed corrupt, a product of the devil, and therefore not worth studying. The Medieval Catholics believed, following Plato, that geometry, numerology, harmony and astronomy better reflected the wisdom of God than did the study of things of this world, but the Protestant Reformation had changed all that. Between the years 1680 and 1780 some five hundred books and articles were published on geology ranging from Bishop Burnet's popular *Sacred Theory of the Earth*, which ran through seven editions between 1681 and 1753, to J.T. Klein's scholarly monograph on a single class of fossils, *Dispositio Echinodermatum* (1732). The Protestants were keen to demonstrate that God's handiwork was as easily seen in this world as in the next, and particularly they were eager to demonstrate the literal truth of the Bible which declared that God had not only created all the creatures of the earth, but had also brought down the Deluge to punish man for his sins.

Shortly after the Glorious Revolution of 1688 when the Catholic monarch was driven out of England, a rash of works appeared eared reconciling the book of Genesis with the new research into Nature. Most successful of these was John Woodward's *Essay Towards a Natural History of the Earth, in* which he explained the stratigraphic sequence of rocks by supposing that during Noah's flood, all the surface rocks of the earth had been dissolved by the sea, later to be gradually precipitated out into the stratigraphic sequences which now comprise the secondary formations. Because the Woodwardian idea preserved the theme of Genesis, that the flood was caused by divine decree to punish men for their sins, it was favorably received by the Anglican Church and later became, at the hands of the Tories, a major bulwark in their defence of monarchy. In 1728, the Woodwardian professorship was founded at Cambridge, the first academic recognition of the field of what is now called "geology," and his ideas were articulated not only in England, but also on the continent, particularly in the popular classes of

Abraham Gottlieb Werner at Freiburg later in the century where Greenough, von Buch, Maclure, Jamieson, Berger, and most of the other founders of geology studied.

In pursuit of Woodwardian Geology, a number of anomalies occurred, in particular a lack of correlation between New and Old World strata, as well as overlays of basalt and granite in what were supposed to be secondary deposits. As a result, Leonard von Buch and Georges Cuvier modified the early diluvial theory into a more general catastrophic theory of the earth in which the earth was seen as not having suffered one catastrophe, but numerous catastrophes of which the Deluge was but the most recent. To deny catastrophism altogether was to deny the truth of the Bible, and hence the theological implications of early geology were quite clear.

In 1673, Bishop Bossuet, tutor to the Dauphin of France, had drawn up his arguments in favor of kingship into a treatise: *Politics drawn from the very Words of Holy Scripture* argued that monarchy was the most common, the most ancient, and the most *natural* form of government. The key word there was '"natural." He argued that Nature provided evidence of being ruled by a divine monarch, God Himself, King of the Universe, and that a King was then emulating God when he ruled with absolute authority: "Thus we have seen monarchy take its foundation and pattern from paternal control, that is from nature itself" Bishop Bossuet writes, and the British spokesman for monarchy, Robert Filmore, echoed Bossuet's words. Monarchy was natural, because all of nature was ruled by a divine absolute monarch, God himself.

In the course of the 18th Century, as democratic sentiments grew not only in America but throughout all of Europe, the political theory of Bossuet and Filmore was seriously challenged. John Locke in his *Treatise on Government* and Jean Jacques Rousseau in his *Discourses* argued against the naturalness of monarchy in favour of a social contract theory of government. But to prove that monarchy was unnatural, it was necessary to prove that the Bible's description of the Deluge was inaccurate, that God had not created the animals and the plants of this earth, and that he had not introduced catastrophes to

punish man for his sins, for these were the biblical and geological models upon which monarchial theory was based. In 1789, on the eve of the French Revolution, accompanied by Erasmus, Darwin, and later by Jean Baptiste Lamarck and Simon LaPlace, the Scottish liberal geologist, James Hutton, published his *Theory of the Earth*, in which he attempted to demonstrate that Nature was not governed by a divine monarch, but by fixed geological laws of volcanic uplift and erosive weathering. Hutton's friend, Adam Smith, was at the same time arguing in favour of a laissez-faire economic policy, in which paternal monarchical power was again eliminated in favour of a free-ranging liberalism.

"Some Judicious persons, who were present at Geneva during the troubles which lately convulsed that city," the Reverend William Paley writes in a counter attack against the new liberalism in his *The Principles of Moral and Political Philosophy* (5th edition corrected 1793), "thought that they perceived in the contentions there carrying on, the operation of that political theory which the writings of Rousseau, and the unbounded esteem in which these writings are held by his countrymen, had diffused amongst the people. Throughout the political disputes that have within these few years taken place in Great Britain, in her sister Kingdom, and in her foreign dependencies, it was impossible not to observe, in the language of the arty, in the resolution of popular meetings, in debate, in conversations, in party general strain of those fugitive and diurnal addresses to the public, which such occasions call forth, the prevalency of the ideas of civil authority which are displayed in the work of Mr. Locke. Such doctrines are not without effect; and it is of practical importance to have the principles from which the obligation of social union, and an extent of civil disobedience are derived, rightly explained and well understood." Paley then went on to explain them not only in the ensuing 567 pages of his *Moral and Political Philosophy* but also in the two volumes of a much longer work on Natural Theology in which the' cosmological foundations of monarchy were once again reiterated.

The "cause" then to which Babbage was referring when he wrote to Lyell: "I think any argument from such a reported radical as

myself would only injure the cause" was that of discrediting Paley and the other Tory Monarchists through an attack on its geological and theological foundations.

PART II

THE CAUSE

After the Napoleonic Wars, England had fallen into a severe depression. Governmental demands for military supplies ceased and there was no market for British goods overseas. To add to the distress and general unemployment, nearly 400,000 troops were demobilized with no place to go. in order to protect the British farmer from imports of cheap grain, the corn laws were instituted in 1815 preventing the import of grain until the price had reached 80 shillings a quarter, a price so high that laborers were starving without being able to pay for it. Although the corn laws were passed to protect the British farmer, they had a devastating effect on British industry and on the towns of the industrial midlands. High food prices drove not only the workers into starvation, but also small businesses into bankruptcy. The Tory solution to the problem was to advise the lower classes not to breed so copiously. Still the towns of the industrial midlands continued to grow mostly, as it turns out, from an influx of the younger sons and daughters of poor farmers. Manchester, for instance, was a small town of 4,000 in 1688. A century later it was ten times that size, and by the time Lyell published his *Principles of Geology*, it was approaching half a million, most of whose inhabitants lived in wretched conditions. Malthus classified towns like Manchester, along with wars, famines and plagues, as a natural check on the population because the death rate was so high.

On August 16, 1819, a crowd of unemployed, underpaid, and underfed inhabitants of Manchester gathered at St. Peter's Field to hear a speech on Parliamentary Reform and repeal of the corn laws. The local militia from the countryside, fearing a rebellion, attempted to arrest the speaker. In the fight that ensued, several were killed and many injured. The monarchist Tory government instituted the "Six Acts" which curtailed the right of free speech and forbade the training of persons in the use of arms. England was on the verge of revolution - the Liberal industrial midlands

versus the Tory monarchists - but the memory of the French Revolution was still fresh among the middle class. They wanted reform in Parliament, not riots. But to reform Parliament meant answering Paley's arguments, and this entailed destroying Paley's Natural Theology.

Paley had argued that sovereignty descends from God to the King; the people are his subjects. Because Parliament is an advisory body, if the king is content with its advice, then there is no need to reform it. The fact that Parliament did not represent the present distribution of people in England, Paley argued, was irrelevant since sovereignty did not stem from the people to begin with. Sovereignty descended from God.

Paley's arguments were amazingly effective. His treatise on *Moral and Political Philosophy*, in which he argued that "it is the will of God that the established government be obeyed" was required for memorization before students could graduate from Oxford or Cambridge. The only way the Liberals from the midlands could get Parliament reformed was to demonstrate that the scientific foundations of Paley's Natural Theology were false, and this meant destroying diluvial geology and catastrophism.

In 1825, Lyell's Liberal cohort George Poulett Scrope *(1797-1876)* published his *Considerations on Volcanoes* in which he transformed the arguments of the Tories by which every time they ascribed a natural event to God, Scrope ascribed the same event to a Volcano, and thereby attempted to revive the geological theories of James Hutton. So perfect- were the laws of volcanic uplift and erosion which God had created at the beginning of time eons ago, Hutton and Scrope argued, that no more had been seen of God since, nor was there any need of him to run the affairs of the universe, any more than there was need of a king to interfere with the natural and intrinsic laws of economics and of society.

Scrope's book was too radical for the London Geological Society at that time, and it was dismissed without a hearing. Scrope, the son of a wealthy London merchant, bought himself a seat in Parliament and pursued the cause by more direct means. But without a cosmological proof that monarchy was unnatural

and that sovereignty belonged to the people, the Liberals remained relatively powerless.

Undaunted by Scrope's failure the young Whig lawyer Charles Lyell now tried his hand at destroying the geological foundation of monarchical theory. In his *Principles of Geology* he took a much more subtle line than had Scrope. In the 100-page introduction to the *Principles*, Lyell argued not so much that the diluvial theory was wrong, as that it was mythological and impeded the '.'progress" of geology. In the first volume he went on at great length concerning the forces of erosion and the effects of volcanic uplift in what was a brilliant avoidance of all evidence of catastrophism. it was just what the moderates were looking for. They rallied around Lyell and elected him first Secretary and then President of the Geological Society.

"By espousing you," Scrope wrote to Lyell on April 12, 1831, "the conclave have decidedly and irrevocably attached themselves to the liberal side, and sanctioned in the most direct and open manner the principle things advocated. Had they on the contrary made their election of a Mosaic geologist like Buckland or Conybeare, the orthodox would have immediately taken their cue from them, and for a quarter of a century to come, it would have been heresy to deny the excavations of valleys by the deluge and atheism to talk of anything but chaos having lived before Adam. At the same time I have a malicious satisfaction in seeing the minority of Bigwigs swallow the new doctrine upon compulsion rather than from taste and shall enjoy their wry faces as they find themselves obliged to take it like physics to avoid the peril of worse evils. I feel some satisfaction in this."

In this day and age when geology is far removed from religion and politics, and when political issues are settled by election rather than at meetings of geological societies, it is difficult for us to understand the extent to which the social shift in world view which took place not only in geology but in astronomy and natural history, was related to the Great Reform movement of 1832. All were part of the far more general shift in world view from paternalism to liberalism, but the persons responsible for engineering this shift were very conscious of what they were doing. "It is a great treat to have taught our section-hunting

quarry men, that two thick volumes may be written on geology without once using the word 'stratum'," Scrope wrote to Lyell on September 29,1832, after Lyell's second volume appeared. "If anyone had said so five years back, how he would have been scoffed at." Just as the Conservatives had refused a hearing to the Huttonian camp earlier, now the Liberals pulled the same tactics when they got into power. The stronghold of catastrophism lay in a stratigraphy where unconformity and nonconformities, to say nothing of massive conglomerates, told of wide-ranging geological disasters of the past. Lyell, like Scrope before him, simply suppressed the evidence which did not fit in with his doctrines, and once he was voted into power, the catastrophists found it increasingly difficult to publish their research.

The Liberal take-over of the Geological Society, and the suppression of evidence favoring the catastrophic position did not come about overnight. Rather, there was a slow assimilation of catastrophic data until there was virtually nothing left to the theory as a whole. When, in 1839, Louis Agassiz attempted to argue in favour of catastrophism with his theory of ice ages, the uniformitarians simply adopted all his evidence, but reinterpreted it in uniformitarian terms. Thus the data did not change, but the gestalt by which that data was organized and given coherence was transformed from catastrophism to uniformitarianism just as the social structure of England was changed from Tory paternalism, in which sovereignty descended from God down to the King, to the new Liberalism, in which sovereignty ascended up from the people through Parliament to its Ministers.

Ironically enough the political battle which underlay the catastrophist-uniformitarian debate of 1832 is now long over, but owing to the paradigmization of science, the uniformitarian gestalt is still assiduously cultivated at universities and in professional geological societies. The "cause" for which Babbage, Scrope, and Lyell were fighting is now long since over and we should feel free to look again at the geological evidence itself, which, if the truth be told, provides ample evidence for catastrophism as it always has.

PART III

CONCLUSION

In 1905 physics had been in a dilemma, some of the evidence from optics indicated that light moved in waves, other evidence indicated that it moved in particles. The two concepts seemed contradictory, but Niels Bohr and Werner Heisenberg were able to show mathematically that the two concepts were actuallv complementarv and provided us with a fuller picture of reality if we accepted them both. Perhaps today geology is in the same situation. We have inherited from our ancestors the idea that either catastrophism must be correct or uniformitarianism must be correct, but not both. The reason they put this as an either/or proposition was political. Either sovereignty belonged to God and the King, or it belonged to the people; it could not belong to both. Therefore geology had either to go with the Tories to catastrophism, or with the Liberals to uniformitarianism; it could not go both ways. Today we no longer have to worry about that. From the evidence of geology, it seems quite clear that both theories are correct: the normal course of events is indeed as Lyell describes it (gentle uplift and slow erosion), but there is also ample evidence that Velikovsky is correct as well and that the earth has indeed been subject to some severe catastrophes as he has so convincingly argued in his *Earth in Upheaval*

In this paper I have attempted to make five major points: first, the London Geological Society, which gave birth to the uniformitarian paradigm, did not originally consist of a group of practicing field geologists, but was comprised of gentlemen, Members of Parliament, clergymen and lawyers, who were primarily concerned with the political and theological implications of geology at the time of the Great Reform Bill of 1832 when the concept of monarchical sovereignty was being challenged by the Whigs and defended by the Tories. Second, that the London Geological Society has been split into two camps, with the Tory catastrophists prevailing before 1832 and liberal Whigs, under the leadership of Lyell, Scrope and, later, Darwin, taking over in the second quarter of the century. Third, that "uniformitarianism" was promoted by the Liberals as part of "the cause" to undermine the theoretical foundations of monarchy and was not derived from-field research. Fourth,

because the Tories were using repressive tactics in politics to prevent the reform of Parliament, the social tension spilled over into the geological debate causing the intense interest in geology in the 1820's and 1830's, and the exponential growth of the newly founded London Geological Society. The Liberals, by seizing control of the London Geological Society before the Reform Bill was passed, presaged what was soon to follow in the political arena. And, fifth, once in control, the Liberals attempted to cement their hegemony by repressing the catastrophists and by assimilating their data.

In the ensuing years of the 19th Century, geology became fully Professional and dogmatic. It became a scientific heresy to believe in the catastrophic theory. The reaction of the scientific community to Velikovsky was one of instinctive repression, not because Velikovsky was wrong, but because it basically fears that he may be right.

Turning now, in closing, to the question of cultural amnesia, I have found little evidence that the Liberals had "forgotten" the catastrophes of the past. Rather the evidence for catastrophism was politically embarrassing to them. At times they may appear to have repressed evidence, but actually they believed in their own liberal vision so strongly that they sought more to reconcile the evidence of catastrophe to this vision than to repress the evidence. If Liberal scientists and historians have remembered too much the peaceful times, it may be that their unconscious has been seeking more a reconciliation of the past catastrophic experience with their present experience of peaceful times, than a repression of those terrible ancient events.

7
LIVING WITH VELIKOVSKY: CATASTROPHISM AS WORLD VIEW

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In this paper on catastrophism and its consequences, I consider Velikovsky and "the new Anthropology"; this work removes the study of man from its present scientific, cyclical world view and places it in an apocalyptic cosmos. This is only a shift in perspective. The spadework, and most of the superstructure, have been done long ago at the formation of the world religions, as Velikovsky argues so convincingly. I will present evidence that the New World Hopis built their cosmology on catastrophism. For a present-day example, the authors of the *Whole Earth Catalogue* illustrate a prototype gestalt which lives with a consciousness of catastrophe. The pioneering effort in this paper lies in appreciating Velikovsky's contribution to an existing paradigm of catastrophism.

My theologian friend, David Arnott, the Vicar of Roundshaw in London, England, read Velikovsky's *Worlds in Collision* while I visited him recently. His criticism: "The fact that a society is interested in a catastrophic understanding of the cosmos is more indicative of the state of the society than of the nature of the cosmos."

This seems fair. We know that people seek world views which complement and support their own perception of reality. So to some real extent the participants of this symposium have already embraced the possibilities that earth exists in a cataclysmic universe, and that man already may have experienced global collisions.

An historian of science doesn't have to look far for the roots of these perceptions. Western, industrial man, whose imperial grasp has embraced all the sources of information upon which Dr. Velikovsky draws (from the New World Codices to the

extensive geological records), is the same man whose philosophy and religious tenets became bankrupt, as Nietzsche's madman proclaimed before the turn of the century. Although this announcement went unheeded, the same message assumed material form in the massive destruction of the World Wars, and by the more widespread trauma heralded by Black Tuesday in 1929. When we consider that this same Man devised the atomic holocausts of Hiroshima and Nagasaki, we can appreciate the setting for an understanding of a cataclysmic cosmos.

As participants in a *new paradigm*, we need not disregard the societal grounds of our being. To those whose consciousness matured during the sixties, the fact of catastrophe becomes the gateway to understanding - the first prerequisite. This catastrophic consciousness even has its own annotated bibliography: the *Whole Earth Catalogue*, an already articulated paradigm which shouts "Rejoice! The apocalypse has already occurred."

I shall argue that the Catalogue was conceived as a post-apocalyptic document providing the readers with a sketch of the new world which unfolds once global catastrophe has surfaced to consciousness.

My own appreciation of this consciousness arose first from infatuation with Anthropology. My readings attempted to explore a basic canon of works dictated by *Pope's maxim*: "the proper study of mankind is man." I thought I was doing strictly exploratory work (Jacques Ellul and the nature of technological society; Lewis Mumford and his thesis of the symbiosis of man and his use of tools; searching for spiritual truths of the aboriginal natives of this continent, the James Bay Cree, the Oglala Sioux, the Yaqui sorcerer, the potlatch, the Hopi ceremonialism; learning to keep bees and not sell honey; Arthur Koestler; developing a detailed awareness of the ecological crisis from Rachel Carson to the politics of the 1970's, from Edward Hall's *The Hidden Dimension* to Buddhist meditation). All these seemed random pursuits, but to my great surprise they proved to be part of this articulated paradigm with annotated bibliography, the *Whole Earth Catalogue*. Both start with a cosmic view of disaster - the common "given" is a view of the

eggshell fragility of Planet Earth and its delicate biosphere. But whereas I speak prosaically, the *Whole Earth Catalogue* sings. It is poetic. It quotes from *The Star Maker* by Olaf Stapleton:

> The sheer beauty of our planet surprised me. It was a huge pearl set in spangled ebony. It was nacreous, it was opal. No, it was far more lovely than any jewel. its patterned colouring was more subtle, more ethereal. It displayed the delicacy and brilliance, the intricacy and harmony of a live thing. Strange that in my remoteness, I seemed to feel, as never before, the vital presence of Earth as of a creature alive but tranced and obscurely yearning to wake.

The *Whole Earth Catalogue* began in 1968 as an *ad hoc* freak enterprise "Ac -cess" was its key concept - how to link up people with tools in a form that would promote the development of an ecological gestalt. Its editor, Stewart Brand, provided a clue to the precepts of this gestalt in an editorial entitled "Apocalypse Juggernaut, Hello":

> As if the spirits of our ancestors weren't trouble enough, now we're haunted by the ghosts of our descendants.
>
> Ken Kelsey claims that ecology is the current handy smoke screen for everybody's Dire Report...I tend to view the whole disaster as an opportunity to try stuff. If you take all the surprise-free projections for mankind's near future and connect them up, they lead neat as you please right into the dead-end meat grinder. The only Earth we had, used up.
>
> (Page 233)

The devotee of the *Whole Earth Catalogue's* peculiar compendium of survival tactics assumes that the catastrophe has already occurred, or is now occurring. The agent may be seen as social unrest or the industrial poisoning of the biosphere. For example: the January 1971 *Whole Earth Catalogue* Supplement devotes one page to Albert Speer, architect, Reich Minister of Armaments and War Production for Hitler, writing as a prisoner:

> I thought of the consequences that unrestricted rule, together with the power of technology - making use of it but also driven by it - might have in the future. This war (II) had ended with remote-controlled rockets, aircraft flying at the speed of sound, atom bombs and a prospect of chemical

> warfare ... A new great war will end with the destruction of human culture and civilization.
>
> The nightmare shared by many people . . ..that some day the nations of the world may be dominated by technology - that nightmare was very nearly made a reality under Hitler's authoritarian system. Every country in the world today faces the danger of being terrorized by technology; but in a modern dictatorship this seems to me to be unavoidable. Therefore, the more technological the world becomes, the more essential will be the demand for individual freedom and self-awareness of the individual human being as a counterpoise to technology.

According to Stewart Brand, the living experiment of the *Alloy* community was the setting in which the Whole Earth paradigm began to unfold. *Alloy* was held in the New Mexico desert between the Trinity Bomb Test Site and the Mescalero Apache reservation, March 20-23,1969 (the Vernal Equinox).

> 150 people were there. They came from northern New Mexico (communes), the Bay area, New York, Washington, Carbondale, Canada, Big Sur, and elsewhere. They camped amid the tumbleweed in weather that baked, rained, greyed, snowed and blew a fucking dust storm. Who were they? (who were we?) Persons in their late twenties or early thirties mostly. Havers of families, many of them Outlaws, dope fiends and fanatics naturally. Doers primarily with a functional grimy grasp on the world. World thinkers, drop-outs from specialization. Hope freaks.

They left behind their proverbs recorded in the catalogue. Here's one: "There's a lot of people who want the Apocalypse. Instead of looking at it as the death force, there's a possibility of the emergence of something new, a reshuffling of the deck."

The Catalogue looks around for what might be salvaged from the great midden-heap of civilization. According to proverbs from *Alloy*: "You're just saying that there is in reality no guarantee that life will continue. The right to live is a fiction. It's a pretense at a political reality." The *Whole Earth Catalogue* says: yeah-yeah, you thought the liberal democratic uniformitarian world system was bust, but you didn't know how bust. First, let's look at the big picture.

> You're too close. Back off and survey the big picture and old mysteries will clear up for you and other mysteries will arrive ... among the discoveries ... is that this lovely place Earth is scarcely inhabited and scarcely habitable. Stare into the void.
>
> (Page 7)

The apocalypse has already occurred. And what might you want to know in order to live in this newly collapsed world? The massive information bank of the Whole *Earth Catalogue* aims to expand the capacities of each human individual so as to increase his survival potential.

> ... Surprises ... is what we (man) are here for. The standard Operating Law when a species is in a bind is to diversify. Multiply alternatives. If you don't know what's coming, the way to evolve ahead of the changes is to try everything.
>
> (S.B. - Page 233)

The *Catalogue* redefines human potential, and provides access to tools for each to begin exploration in their brave new world; it acknowledges the godhood of humanity and challenges man to accept the responsibility. Although it may seem that only the selfish and egocentric would interest themselves in learning to survive while the rest of humanity perishes, that can be only the criticism of an outsider to this world view. Once the paradigm is embraced, adventure, joy and the drama of discovery, with its colossal blunders and momentary awards, provide the necessary spiritual tutorship - the centering knowledge to live in the present - to be here now.

As one of the conscious inhabitants of this globe, Man is awakened from his lethargy by the sound of alarm bells: crisis. 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. We

acknowledge the Russian Roulette of the planetary system. People are dying all around us. We live in the now. Now what?!

Much of the philosophy that the cataclysmic paradigm looks to is found in the eastern spiritual teachings. Eastern man has honed his consciousness as assiduously as we have developed our technology. He learned that to comprehend the cosmos, he must look into the void. "THE VOID?!" Western man declares, "Why there's nothing there." This is the most terrifying prospect for material man to envision. For centuries we have codified laws, erected structures and systems, and designed labyrinths to cushion us from even a hint of nothingness. Rational Apollonian scholarly Western man needs more than the ecstatic revelations of an Eastern mystic to reveal the nature of the cosmos. And this is the great contribution of Velikovsky.

Velikovsky not only argues in consummate detail (in the finest of Western scholarship), he not only uses Western methods to illuminate his truths. He uses Western sources to prove his case! His work reinterprets our own canons of knowledge, the whole Hebraic heritage and the very precepts of the scientific tradition. These are the building stones of his new cosmology. From the genesis of Judaism, with the flight out of Egypt during catastrophic circumstances, to the frontiers of modern physics, his theory is revealed. Better than affirming the possibility of catastrophe, Velikovsky has provided an argument in Western terms for a catastrophic cosmology.

This symposium is in fact a celebration of the acceptance of the legitimacy of Velikovsky's work. Far from being a crisis-induced scramble for an apocalyptic band-wagon (a revival in the scholarly world, as so many established academics regard it, of the gloom-and-doom popular hysteria fads about the end of the world) it is more the reaffirmation of much that modern, progressive, liberal democratic science has shunned or railroaded completely out of existence. Probably each participant to this symposium is attracted by a particular aspect of Velikovsky's work. Appropriate to the physician's calling, Velikovsky has provided the fragmented specialization of the multi-versity with the cool healing of an interdisciplinary synthesis.

For my part, I celebrate the reaffirmation of an historic universe where unique events inevitably alter our course. This affirmation of the Hebraic side of our heritage counters science's preponderant influence from the Greeks and their cyclical cosmos, their search for harmony in the heavens. With an historic perception, the mysterious potential to life is reaffirmed. If we are in a paradigm shift of which Velikovsky is an integral part, it is partly as a reaction to the confining vision of man that science imposed. For science's cosmos operated by laws, and eminently knowable laws at that. The corollary: knowing those laws provides science with manipulative power over that which operates by the laws, whether people or principles of aerodynamics. Science has restricted too far the vision of biotic potential; it has obscured past, present, and even future with predictability, and hence monotony.

The catastrophic paradigm celebrates that which is mysterious in the nature of life. This is Wendell Berry's Manifesto for the Mad Farmer Liberation Front in the *Whole Earth Catalogue:*

> Love the quick profit, the annual raise, vacation with pay. Want more of everything made. Be afraid to know your neighbours and to die. And you will have a window in your head. Not even the future will be a mystery any more. Your mind will be punched in a card, and shut away in a little drawer. When they want you to buy something, they will call you. When they want you to die for profit, they will let you know. So, friends, every day do something that won't compute. Love the Lord. Love the World. Work for nothing. Take all that you have and be poor. Love someone who doesn't deserve it. Give your approval for all you cannot under stand. Praise ignorance, for what man has not encountered he has not destroyed. Ask the questions that have no answers. Invest in the millenium. Plant sequoias. Say that your main crop is the forest that you did not plant and you will not live to harvest. Say that the leaves are harvested - when they have rotted in the mould. Call that profit. Prophesy such returns. Put your faith in the two inches of humus that will build under the trees every thousand years. Listen to carrion - put your ear close and hear the faint chattering of the songs that are to come. Expect the end of the world. Laugh. Laughter is immeasurable. Be joyful though you have considered all the facts..... As soon as the generals and the politicos can

> predict the motions of your mind, lose it. Leave it as a sign to mark the false trail, the way you didn't go. Be like the fox who makes more tracks than necessary, some in the wrong direction.
>
> Practice resurrection. (W.E.C. - Page 25)

The mysterious open-ends what is possible, unlinks the chain and rejuvenates the world.

Velikovsky's thesis began with a reappraisal of the view that myths were founded on material reality. His cross-cultural comparisons argue for a common material reality for all the survivors of the last global upheaval. This interpretation acts as a great restorative to the effect of the sludge which the functional schools of interpretation have hardened over our understanding of world mythologies.

Let us read the first revelation of the Hopi's historic and religious world view of life with this new acceptance of its validity. The Hopi hold that our planet has experienced three world ages and that this is the fourth. Each age has been terminated by physical apocalypse which has dramatically altered populations, bringing some to the fore and casting down others. Each has set fresh conditions for the possibilities of life on this globe, and dramatically altered the consciousness of survivors. In describing the end of the second world age, they first tell of moral decay and the inadequacy of man to hold up his part in the song of creation; then:

> ... as on the First World, so again Sotuknang called on the Ant people to open up their underground world for the chosen people. When they were safely underground, Sotuknang commanded the twins, Palongawhoya and, Poganghoya, to leave their posts at the north and south ends of the world's axis where they were stationed to keep the earth properly rotating. The twins had hardly abandoned their stations when the world with no one to control it, teetered off balance, spun around crazily, then rolled over twice. Mountains plunged into seas with a great splash, seas and lakes sloshed over the land; and as the world spun through cold and lifeless space, it froze into solid ice.

Quite clearly the basis for the Hopi cosmology is a catastrophic view of existence. They, like the Israelites, began this age amidst

a violent upheaval which initiated their migrations in search of their chosen land. Their goal, on the bleak mesas of the American southwest, is

> ... to sustain forever responsibility for the well-being of the world. Theirs is the mysticism not of change, but of the stability of the yearly cycle of one winter's food at a time.

Now you have experienced this paradigm travel full-circle; for these lines are from the review of the *Book of the Hopi*, contained in the *Whole Earth Catalogue.*

Velikovsky argues for the integrity of the Hopi cosmology with material reality. The Hopi provide us with an archetypal response of life to a cataclysmic consciousness. Concern for the welfare of the earth unites the new anthropology to the wisdom of the Hopi.

I have attempted to show that catastrophism is a current paradigm which Velikovsky provides with a Western mythology. Since the writings of Thomas Kuhn, we acknowledge that one of the properties of a theory is its contextual basis in an existing, but often unarticulated, cultural milieu. My prime concern has been to explore the implications of living with the knowledge of catastrophism. Here is the best statement of this calling my years of ecofreaking have uncovered, authored as "The Four Changes" by poet Gary Snyder, and, of course, contained in the *Whole Earth Catalogue:*

> Our own heads: is where it starts. Knowing that we are the first human beings in history to have all of man's culture and experience available to our study and being free enough of the weight of traditional cultures to seek out a larger identity - the first members of a civilized society since the early Neolithic to wish to look clearly into the eyes of the wild and see our self-hood, our family, there. We have these advantages to set off the obvious disadvantages of being as screwed up as we are - which gives us a fair chance to penetrate into some of the riddles of ourselves and the universe, and to go beyond the idea of 'man's survival' or 'the survival of the biosphere' and to draw our strength from the realization that at the heart of things is some kind of serene and ecstatic process which is actually beyond qualities and certainly beyond birth-and-death. 'No need to

> Survive !' 'In the fires that destroy the universe at the end of kalpa what survives?'- 'The iron tree blooms in the void!'

Knowing that nothing need be done, is where we begin to move from.

8
AFTERWORD

Immanuel Velikovsky

The symposium draws to a close. I appreciate the effort made by the organizers on behalf of this University and the members of the faculty who participated as moderators; the dedication of those of you who came from afar to read the prepared papers, and of those who have followed my work with interest and devotion, some over many years since 1950, others who have become new adepts. I appreciate those who participated in this is symposium by listening to two days of papers on the subject of "Cultural Amnesia."

My work has ramifications in many fields of knowledge. Once I had begun to understand that global catastrophes caused by extraterrestrial agents had occurred, I had to face problems in many fields.

First I had to check in each field to determine the current situation and evaluate the prospects for revision. As soon as you accept that a global catastrophe has occurred, many problems thought to be insoluble solve themselves. In geophysics the origin of mountains is not established, nor is the origin of ocean salt. Palaeomagnetic changes and reversals create unsolved problems. The cause of dramatic changes in climate is not understood. Exactly at those times when I determined that the catastrophes took place there were records of unexplained changes in the ocean level.

Since its inception in 1859 the theory of evolution has altered the ways in which we think to such a degree that even philosophy has become a branch of Darwinian evolution, and is helpless to solve the problems that it creates for itself. Before the theory of evolution emerged it had been maintained that our Earth was created in six days. Slow evolution replaced instant creation. But was Darwin's theory right? No, it was only partly so. This has become increasingly apparent in the last twenty

years, and it should have been apparent early in this century when mutations were first observed.

There are problems in astronomical cosmology where we attempt to explain how everything came into being and how it attained its present state. Neither the Nebular theory nor the theory of tidal disruption can fully explain the creation of the Solar System. Neither the Big Bang nor the Steady State theory explains the beginning of the Universe. No single solution exists, no one theory is flawless.

In celestial mechanics the dogma persisted until very recently (and still persists today with some astronomers) that gravitation and inertia are the only forces that affect celestial motions. Yet many astronomical motions are more readily understood when electric and magnetic forces are included as the evidence now clearly requires [1].

Frequently, I am called upon to speak to gatherings of space-scientists [2]. 0n such occasions I ask the assembled physicists and engineers if there is anyone present who still claims that Jupiter with its magnetosphere can travel through the interplanetary magnetic field without being affected, or if the satellites of Jupiter can travel through the magnetic field of Jupiter without being affected by it. Thousands have heard me lecture, yet I have never seen one arm raised, whether I spoke at Harvard, Princeton, or NASA.

In 1950 my claim that electric and magnetic forces acted in the cosmos was considered my greatest offense. Even before *Worlds in Collision* was published, Einstein warned me that the importance I placed upon electricity and magnetism in cosmic problems would be violently attacked by other scientists. But I stood my ground. Especially it appeared to me that sun-grazing comets are carried around the Sun by electric and magnetic forces in preference to gravitational forces. This is, of course, not yet proven.

Other critics told me that the greatest minds of the past had established with exact precision the ability to predict eclipses centuries in advance on the basis of only gravitation and inertia

acting in the cosmos. But I was not dismayed, I met the competition head on, whether the opposition criticized me fairly, as in the case of Einstein with whom I argued often for long hours and exchanged quite a few handwritten letters [3]. or whether the criticisms were attacks and defamation. The attacks do not help me to complete my work.

Several other fields besides celestial mechanics must also be re-examined. How must global catastrophes affect the interpretation of ancient civilizations? What significance do the surviving relics of those civilizations have for the archaeologists and historians? We have to re-examine the meaning of mythology. The Freudian ideas that traumatic experiences cause the human race to be possessed by irrational motives, such as the urge to self-destruction, is of fundamental importance.

In 1950, the appearance of my work created a new phenomenon in the politics of science. Never in the history of science has there been anything comparable to what has happened in the last twenty-four years. In the 15th and 16th centuries when there were no newspapers, radio, or television, wholesale repression of an idea was extremely difficult. Communication was slow, usually by exchange of letters [4]. But even when more rapid communication became possible, nothing occurred which could be compared to the violence and the dishonesty of many incidents in the "Velikovsky Affair." As a subject of discussion, of papers, and of graduate dissertations, the "Velikovsky Affair" has become a favourite subject on campuses across the country (although I speak about the United States I assume in Canada too) for sociologists and historians of science.

No one can possess the knowledge required to be an expert in so many fields [5]. Equally, we cannot understand the happenings in various fields if those fields are examined in isolation. Nature is one: it is not subdivided into departments or separated compartments. No one can spend enough time to emulate the ancient philosophers like Seneca or Aristotle who discussed all of the knowledge of their day. Yet the understanding of nature becomes a question of interdisciplinary synthesis. Generalization is increasingly being favoured by the scientific press.

It is clear that no progress can be made discussing an interdisciplinary subject as a whole. This is why I published different evidence in separate books, like *Earth in Upheaval*, where I deal with stones and bones and evolution. There is not a single reference to anything from our human heritage. There were many references in Pliny, Strabo, Herodotus, and the ancient Egyptian sources that I could have used profitably in that volume, but I resisted. The geological evidence had to stand on its own merits. Although we recognize the interconnection between fields, each field needs to be discussed within its own frame of reference.

In defense of my theory I have had many confrontations. in particular, I remember one confrontation at Brown University, some seven years ago, when I was pitted against four specialists: one in Babylonian mathematics, one in astronomy, one in physics, and one in geology. I stood alone.

At the AAAS meeting in San Francisco just two months ago I participated in a similar debate which lasted seven hours. The audience showed by their standing ovation that they took my side, the side of the heretic. I had shown that the very same problems which plagued scientists in one field were identical to the problems in the next field. Common problems plagued the astronomer, the geologist, and the historian of Babylonian mathematics. Each of these specialists spoke about the very same subject without recognizing it.

This year there are five symposia discussing my work [6]. At each I will face assembled experts and defend my work in each separate field.

I have now a more serious problem. The new idea which I have provided now spreads like wildfire. Discussion on one campus leads to invitations to other campuses, the invitations increase in geometric proportion. Just two hours ago I received an envelope containing an invitation to travel to Montreal for another series of lectures.

I have much to do: I started late in life. I was forty-four when I arrived in this country for an eight-month sabbatical. I have

remained thirty-five years, the prisoner of an idea. I did ten years of work before the publication of *Worlds in Collision*. Shortly thereafter, my second book, *Ages in Chaos*, Volume One was published. The second volume of this latter work was already in page roofs and I called them back for elaboration. For the past twenty-two years I have elaborated upon *Ages in Chaos*, making the original second volume into four new volumes [6A].

I must now ask the question, at my age, with only one short year and a month away from being an octogenarian, can I continue to attend meetings and debate these issues? Can I continue to answer questions which are sent to me? Can I advise scientists, and write articles for *Pensée*? Each task is a heavy load by itself.

At the same time I will do my utmost while I am still physically able to finish those books which are now partially complete. I have a manuscript for a book which discusses catastrophes which precede those described in Worlds in Collision. I mentioned something of these catastrophes in my talk yesterday. Most important, I must complete the manuscripts for the four remaining volumes on ancient- history, *Ages in Chaos[7]*. would like this series, my Opus *Magnum*, to be as complete as possible. It is my *Opus Magnum* even though the main problems are in cosmology, psychology, and geology, and not in ancient history. When I asked the question, could the catastrophes that are described in the ancient sources be correlated between Egyptian and Biblical sources, I discovered a systematical chronological error in ancient history. To my amazement, I discovered that descriptions of' ancient history were confused; acccepted dates meant nothing. For the past twenty-four years scholars have debated whether the beginning of the reign of Ramses the Second should be moved from -1289 to -1303. As I show in *Ramses II and his Time*, this debate has absolutely no meaning if Ramses belongs at the end of the seventh or at the beginning of the sixth century before the present era instead of centuries earlier.

Another volume deals with the *Dark Age of Greece*. In it I will show how the Homeric Problem can be eliminated [8]. No documents or buildings have survived from the Dark Age, the ancient Greeks never mentioned it and seemingly knew nothing

of it. its removal gave me great satisfaction, and should exhilarate Greek scholars, because the last link to a misguided Egyptian chronology can now be severed from Greek history. The traditional Egyptian chronology was devised hundreds of years before the first hieroglyphics were ever read, and was based upon erroneous astronomical calculations. In a recent issue of *Pensée[9]* I published a paper discussing the astronomical basis of chronology. Can anyone who has read this paper seriously believe in the traditional chronology based upon fallacious astronomical calculations?

Imagine twelve hundred years of ancient history as the span of a bridge. Though this span does not include all of ancient history, it does cover the period from the end of the Middle Kingdom to the time of the second Ptolemy. I tore down one abutment in Volume One of *Ages in Chaos* (which not every critic has seen or read) and now I am ready to do the same thing to the second abutment in my next book, *Peoples of the Sea*. How can the middle span between two abutments survive? It will topple down. Even with the revision chronological problems will remain, but their number will be greatly reduced.

I need more of you to follow my path, I need help from those of you who can take my work seriously, read my books, consider what I say, agree with my principal thesis, but then dig a little deeper to find its flaws. I don't need more critics who never bother to read my books (like the critic from this University who obviously never read *Ages in Chaos* before speaking critically about it). I can't expect all critics to be positive, but critics who are negative should at least be constructive.

Wherever in my studies I encountered an apparent difficulty on the way to a solution, experience has shown that the difficulty usually opened a doorway to a new pathway; beyond it lay a whole new vista. New solutions in one field provide the way to new understanding in other fields. Of course, I have left many problems unsolved, I am not omniscient. My work is not without error: I am dedicated, but I am only human.

I realize the scope of what I have discovered and I have been fortunate to live to see parts of my theory confirmed. So many

innovators have not lived to see any of their claims confirmed. The history of science abounds with such cases. All innovators are iconoclasts. They never start with a majority; always they begin as a minority of one.

I believe that now is the time for me to go into seclusion and wait. When my new volume appears in print I must let the storm that may occur blow itself out. If I take time to visit universities I will do so only to find dedicated young men, capable of following new ideas: men of courage who are willing to consider ideas which are not very acceptable when they are first put forward. *Such men must be prepared to drop their ideas when facts show them to be wrong.*

Here on this campus I heard to my satisfaction that my ideas have been seminal, that members of the faculty belonging to various departments that once had no common interest now have much to discuss. This evening at the Chancellor's Dinner[10] I will stress how my effort has provided a common coefficient for scholars in different 'subjects.

I ask for help from the younger generation who have already educated themselves in one or another field which touches upon my work, to do those tests that I cannot perform, to supply me with literature that I have no time to find, and to give me criticism when I err.

I want to hear from those of you who already do such research. I want to hear in what fields you do your research and how it is proceeding. I am interested in your work, whether it is the study of the ancient kings, geology, or genetics.

In this auditorium I am probably the oldest in years, but in spirit I am among the youngest. I invite the younger among you, not just those who are young in age, but the young in spirit to add your efforts to my own. Don't just be listeners, don't just be autograph seekers. If you can, do your share. I have started, you must continue.

I am not the best listener, my eye is better than my ear. Yet I am a very slow reader, but what I read I usually remember.

Sometimes I quote from books that I read as a child and have not seen for seventy years. My memory is very selective, I can't remember telephone numbers, but I remember chronological data with ease. If I must memorize a telephone number because I call it frequently, I connect it with some chronological dates, and then I can retain it.

I appreciate the efforts in preparing the papers for this symposium. Certainly something has been achieved. There are many new ideas included in, the papers presented here by de Grazia, MacGregor, Mullen, Wolfe, Grinnell, and Doran.

And with these words, I repeat my thanks to President Beckel, Chancellor Oshiro, Vice-President Holmes, to the members of the Senate, to the members of the Faculty, to those who read papers, and to those who came to listen to somebody who was once a heretic, but whose prayer is that his works should never become a dogma.

Again, I thank you all.

Notes (Afterword)

1. The importance of electric and magnetic phenomena in the solar system is not yet fully appreciated by scientists. The discovery of extensive planetary magnetospheres, the interplanetary magnetic field, the solar wind, the emission of radio noises by Jupiter, the existence of net electrical charges on the Sun and probably upon the planets, and the non-Newtonian behaviour of the solar prominences indicate that electric and magnetic phenomena occur in all parts of the Solar System.

2. Dr. Velikovsky has lectured recently at several scientific centres and universities.

17 February 1972 - Harvard University
10 August 1972 - N.A.S.A. Ames Research Centre
15 - 17 August 1972 - Lewis and Clark College, Portland, Oregon
10 October 1972 - Graduate College Forum - Princeton University
15 October 1973 - Expanding Awareness Program, IBM San José Research Centre
10 December 1973 - N.A.S.A. Langley Research Centre

He has participated in seminars and staff briefings with scientists working upon the Mars Viking, the Venus-Mercury Mariner, and the Jupiter-Saturn Pioneer Space Probes.

3. In 1921 Velikovsky and Einstein collaborated in publishing a series of monographs, later collected in two volumes, *Orientalia et Judaica*, and *Mathematica et Physica* under the common title of *Scripta Universitatis atque Bibliothecae Hierosolymitanarum*. Velikovsky was the general editor and Einstein edited the mathematics and physics volume.

4. Dr. Velikovsky is implying that heresies such as Galileo's could spread outside the confines of the specific jurisdiction where they were published. Poor communications allowed the heresies to flourish elsewhere because the central authority was slow to hear that the heresy had spread and by then counter edicts would arrive too late to extinguish the heresies. [Ed.]

5. It took Dr. Velikovsky five years to acquire the knowledge necessary to interpret the evidence needed to write *Earth in Upheaval.*

6. In 1974 there were five separate symposia organized by separate organizations or institutions. At each a different aspect of Velikovsky's synthesis was discussed. Although Velikovsky participated at all five symposia, he was not involved in initiating or organizing any of the symposia. The five symposia were:

Velikovsky's Challenge to Science, 25 February 1974. American Association for the Advancement of Science, San Francisco, California.

Velikovsky and Cultural Amnesia, 9-10 May 1974, The University of Lethbridge, Lethbridge, Alberta.

Velikovsky and the Recent History of the Solar System, 16-19 June 1974, McMaster University, Hamilton, Ontario.

Velikovsky's Reconstruction of Ancient History, 30 October 1974, Pittsburgh Historical Forum, Dusquesne University, Pittsburgh, Pennsylvania.

Velikovsky and the Politics of Science, 2 November 1974, Philosophy of Science Association, Notre Dame University, Indiana.

6A. See note 7 below.

7. That these four volumes have taken twenty-two years to complete is indicative of the thorough scholarship exhibited by Dr. Velikovsky. Two of the four volumes *Peoples of the Sea*, which covers the Persian Period (-524) to the second Ptolemy (-279), and *Ramses II and His Time*, which covers the period of the Chaldean Domination (-611 to -524), had been typeset for printing at the time of this Symposium. The former volume is now published. The latter will be released by Doubleday and Company Inc. (New York) in April 1978.

In the remaining two volumes Dr. Velikovsky discusses the *Assyrian Dominations*, the New Assyrian Empire to the fall of Ninevah (-829 to -611), and the Dark Age of Greece (see below). These two volumes have yet to be completed [Ed.]

8. The Homeric Question is a five-hundred year Dark Age interposed between the historical period of Greece and the Mycenean-Minoan eras.

9. "Astronomy and Chronology", *Pensée* 3(2),:3849 (Spring-Summer 1973). This article appears as a supplement to *Peoples of the Sea* (Doubleday, 1977).

10. 10 May 1974. See Appendix II.

I. ABOUT THE AUTHORS

Brief biographical sketches of each of the authors are reprinted here. These sketches are adapted from the introductions given the speakers during the Cultural Amnesia Symposium.

Immanuel Velikovsky

It is my honor to introduce tonight's speaker, Immanuel Velikovsky. A few in this audience know Dr. Velikovsky very well indeed and need no introduction. Some others know a good deal about him and about his work and very little introduction is required. So my remarks will be directed mainly at those who know something, of his work but perhaps not very much of the man himself.

Immanuel Velikovsky was born in 1895 in Vitebsk, Russia; the youngest of three sons of Simon Velikovsky, businessman and Hebrew scholar, and Biela Grodenski, a fluent linguist. Moving to Moscow he enrolled at the Medvednikov gymnasium where he excelled in Mathematics and Russian and graduated with a Gold Medal in 1913.

He then proceeded to Montpellier in Southern France to study Medicine, sojourned briefly in Palestine, then enrolled for further medical studies at the University of Edinburgh. Home for the summer vacation in Russia at the outbreak of World War 1, he graduated in Medicine from the University of Moscow in 1921.

For the next three years Dr. Velikovsky lived in Berlin immersed in scholarly publishing, and attempting, among other activities, to establish a Jewish academy. There he met and married Elisheva Kramer, a young violinist, who happens to be with us at this conference today.

In 1924 the Velikovskys moved to Palestine where he practiced first as a general practitioner, and later as a psychoanalyst in Jerusalem, Haifa, and TelAviv. During this period he

commenced research on Freud's heroes, Oedipus, Akhnaton, and Moses.

To further his growing commitments to this research Dr. Velikovsky and his family visited New York in the summer of 1939. Influenced to remain in America through the forces of world events as well as the course of his own research, he became interested in the theme of catastrophes that he identified running throughout his studies of ancient records.

From 1940 to 1950 he researched and wrote *Ages in Chaos* and *Worlds in Collision*. In 1950 the latter volume was first published by Macmillan; and in 1952 Doubleday published the first edition of *Ages in Chaos*. In 1955 *Earth in Upheaval* appeared, and in 1960 *Oedipus and Akhnaton*.

Currently Dr. Velikovsky resides in Princeton, New Jersey, where more scholarly works are in various stages of preparation.

But such a simple and sketchy recording of dates and places leaves so much unsaid about the distinguished speaker at tonight's session, and it lacks the basis for insight into his works. For example, it does not adequately describe a young lad maturing in a household steeped in learning; his mother-tongue Russian, mastering Hebrew at four, German at six, French at seven, Latin at twelve, and finally English - the eventual language of his famous publications.

Nor the goals of his father, transmitted in part to the son, to recreate Hebrew as a living language, to redeem Israel, and to found a Jewish academy.

Nor does the skimpy record reveal the ambitious youth repeatedly denied admission to the University of Moscow because of his Jewish ancestry, only to enroll in the Free University in Moscow maintained by dissident professors who had resigned from the Imperial University in protest against violation of academic freedom.

Nor the rebel who once abandoned studies to explore with religious passion the ancient ruins of the Holy Land.

Nor does it portray the young intellectual who with burning zeal co-published a series of volumes of the works of outstanding Jewish scholars, assisted by Albert Einstein, who edited the scientific section, and encouraged by Chaim Weizmann, later to become the first President of Israel.

Nor the early papers on Freudian psychology written by the over-burdened practicing physician in Palestine.

Nor does my sketchy biography depict properly the excitement and stimulation of the discovery of the Ipuwer Papyrus, the key that unlocked the Egyptian record of catastrophe.

Nor the eleven years of persistent painstaking search for worldwide evidence of cataclysm; first into the library in the morning, last to leave in the evening, with no sabbaths or holidays permitted.

Nor the laborious and meticulous recording of notes from more than 4,000 volumes for *Ages in Chaos alone*.

Nor does it depict the reluctance to plunge into inevitable conflict with astronomers, but the equally inevitable conviction of the cometary origins of cataclysm.

Nor the notorious attempts to suppress publication of his results and conclusions.

Finally, neither does it begin to suggest the intellectual excitement that the examination of Velikovsky's works and ideas have engendered at this University of Lethbridge.

The records do report this concluding remark by Dr. Velikovsky to a graduate college forum at Princeton University, and I quote

> "Imagination coupled with skepticism and an ability to wonder - if you possess these, bountiful nature will hand you some of the secrets out of her inexhaustible store. The pleasure you will experience in discovering truths will repay you for your work; don't expect other compensation, because it may not come. Yet, dare."

Ladies and gentlemen, I present Dr. Immanuel Velikovsky.

- Owen G. Holmes
(The University of Lethbridge)

Alfred de Grazia

It is not an easy task to introduce so eminent a scholar as the one I am to present now. To do justice to the excellent records and achievements of Dr. Alfred de Grazia would deprive you of at least half the time allotted for this session. For example, just some of the universities with which Dr. de Grazia has been affiliated at one time or another include: Chicago, Minnesota, Stanford, Harvard, Columbia, Rutgers, Bombay, Istanbul, and Gothenborg. So I will not go into detail.

As a political scientist, Dr. de Grazia is well known for his work, *Public and Republic*, and more recently, *Politics for Better or Worse*, published last year. But Dr. de Grazia is more than a political scientist. His interests in other disciplines and activities are well attested by works such as he produced when publisher and editor of *The American Behavioral Scientist;* creator of the Universal Reference System; his book *Kalos*, which incorporates some of his own thoughts for future world order, and, of course, editor of the important volume *The Velikovsky Affair*, published in 1963.

Dr. de Grazia is currently Professor of Social Theory and Political Psychology at New York University. Now, as to his personal data, I can tell you that he was born in Chicago and graduated Phi Beta Kappa from The University of Chicago in 1939 at the age of 19. His military career began at the rank of Private and moved through to the rank of Captain. His family background, he has told me, includes an uncle by the name of Charlie, "Kid Lucca," who won the Canadian Boxing Championship in 1910 in nearby Calgary.

While I could go on for quite some time adding interesting background points for you, I feel I should cut this introduction

short and let the eminent speaker speak for himself. I'm sure all of you will enjoy his talk.

Ladies and gentlemen, it is a great pleasure for me to present Dr. Alfred de Grazia.

- F.Q. Quo
(The University of Lethbridge)

John M. MacGregor

John MacGregor obtained an honours degree in Art History at McGill University. Following this, he went to Princeton, where he spent the years 1966 to 1971 qualifying for a Masters Degree and completing the course requirements for the Ph.D. degree. During these years Mr. MacGregor also conducted research in Morocco and in Germany.

Mr. MacGregor's studies have included various aspects of Psychiatry and Psycho-analysis. In 1967 and 1968 he studied with Dr. Rollo May at Princeton. Following this he was a guest at the Menninger Foundation in Topeka. He underwent analysis with Jolande Jacobi at the C.G. Jung Institute in Zurich, followed by intensive Freudian analysis in Montreal.

Mr. MacGregor is a member of the American Society for the Psychopathology of Expression. His teaching activities give us some indication of his interests and of his competencies. He has lectured on the history of Chinese Landscape Painting, Chinese Art and Archaeology, Theoretical Investigations into the Art of Children, and Introduction to the Study of Art and Psychiatry.
Without further introduction, I present you John MacGregor.

- George Sanderson
(Saint Francis Xavier University)

William Mullen

I am very pleased to be here to introduce one of our speakers today. I am also pleased to take part in this conference as a

member of the Department of History and the University of Lethbridge. This is not because I have come here either to praise Dr. Velikovsky or to see him buried, but rather because I Support an old tradition, which goes back to New Testament times at least. when en the matter of Christian preaching by the apostles was raised before the Jewish Sanhedrin, one member of that body, Gamaliel, made the point that if what the apostles taught were true, it would prosper; if it were not, it would fail. And I would say much the same thing: if what Velikovsky has to tell us is true, it will stand, if not it will fade away. But only through conferences such as this will we be able to ascertain what the truth is. John Milton once said: "Give me the liberty to know, to utter, and to argue freely according to conscience, above all liberties"; while John Stuart Mill pointed out in his famous work *On Liberty* that if only one among all men presents a new and novel idea, even though it be heresy to some, it should be given a full hearing. I hope, therefore, that we are within the spiritual tradition of those two great men when we examine the ideas of Velikovsky and not the man himself.

I am proud that the University of Lethbridge has sponsored discussions respecting Dr. Velikovsky's ideas so that we will have the opportunity to listen, to evaluate and to reason. And, therefore, with that in mind, I hope you will give your attention and due respect to our next speaker, Dr. William Mullen.

Dr. Mullen completed his undergraduate work at Harvard between 1964 and 1968, with a B.A. in Classics - in Latin and Greek - and his graduate work at the University of Texas, between 1968 and 1971, where he received a Ph.D. in Classics. Between 1971 and 1973 he taught as an assistant professor at the University of California at Berkeley, in the Departments of Classics and Comparative Literature, and in the Division of Interdisciplinary Studies. He now holds a post-doctoral Research Fellowship, and is at present Hodder Fellow in the Humanities at Princeton University.* He has done work on the Pyramid Texts from the Pyramid of Unas in the 5th dynasty, he has publications on the Odes of Pindar and translations of Egyptian Hymns and Laments, as well as articles on Dr. Velikovsky's interdisciplinary syntheses and a reading of the Pyramid Texts in the light of catastrophisms. He is associate editor of *Orion, a journal of*

Classics and the Humanities published from Boston University, and Associate Editor of Pensée Magazine. He will speak at McMaster University next month on the subject of the Meso-American Record Myth and the Science of Catastrophism.

Dr. Mullen ...

- M. James Penton
(The University of Lethbridge)

*Dr. Mullen is now Assistant Professor, Department of Classical Studies, Boston University.

Irving Wolfe

"The lunatic, the lover, and the poet / Are of imagination all compact." Thus the Duke Theseus in Act V Scene I *A Midsummer Night's* Dream concisely expresses his theory of the Springs of Art. It is a fortunate accident, I hope, that I lit on *A Midsummer Night's* Dream to introduce Dr. Wolfe, since he tells me that he is using the Dream as one of the central plays in his presentation this afternoon. Theseus goes on to elaborate his theory of the Springs of Art in a familiar passage which I would like to read to you. It goes on "The poet's eye, in a fine frenzy rolling,/Doth glance from heaven to earth, from earth to heaven; /And as imagination bodies forth/The forms of things unknown, the poet's pen/Turns them to shapes and gives to airy nothing/A local habitation and a name." Now in context in the play it is clear that Theseus is rather ambiguous; about this approach to art, ambiguous about the nature of the poetic imagination and about the nature of its products. The Velikovsky Symposium Committee is fortunate then to have found in Dr. Irving Wolfe, a person who has been working on precisely this question, and who is able to illuminate something of this ambiguity about the nature of the creative process, that elusive thing in which we students of literature are particularly interested, and, I think, the aspect of Dr. Velikovsky's theories, which particularly attracts people in literary disciplines,

Dr. Wolfe was educated at McGill University and later at Bristol University where he took a Ph.D. in Drama; he is presently *Professeur assistant, Department d'études anglaises,*

l'Université de Montréal; he teaches there Shakespeare and Drama, in particular, and his contemplation of Velikovsky's theories over the years has led to the formation of a theory about the sources of art, based particularly in his study of Shakespeare.

And so I would like you to welcome Dr. Irving Wolfe.

- LR. Ricou
(The University of Lethbridge)

George Grinnell

It is my pleasure to introduce Dr. Grinnell of McMaster University. Dr. Grinnell is an assistant professor of History whose special area is the history of science. He completed his Bachelor of Science at Columbia University in 1962, his Master's Degree at Berkeley in 1964 and his Ph.D. at Berkeley in 1969.

He has had a colourful background. Prior to pursuing his academic career he tried to be a free-lance writer but, as he says, without success. After two, no doubt scintillating, years in The Signal Corps of the U.S. Army he joined the *Moffatt Expedition* which crossed the tundra by canoe in 1955, the films of which were shown on the T.V. program "Bold Journey". The next year, 1956, he was stage manager for the Downtown Theatre Association in Greenwich Village. Currently he is completing a book on the sociology of scientific knowledge.

The history of science can give us, I think, a unique perspective not only of the past but also of the present. And by doing so can help us understand the present. Dr. Grinnell's paper tries to help us understand what has come to be called "The Velikovsky Affair" by, I believe, fitting it into a larger historical content. Dr. Grinnell ...

- R.M. Yoshida
(The University of Lethbridge)

Patrick Doran

I think it is fair to say that when most of us speak of catastrophism we do so in past or future terms, rarely considering the implications of our involvement in a catastrophe. Patrick Doran, on the other hand, I think might best be described as a present-tense catastrophist. He has notably been involved in a survival-day project in 1970, and was also national co-ordinator of a nationwide effort to bring to the attention of the federal government the ecological catastrophes in which we are presently involved. He was introduced to the ideas of Dr. Velikovsky in 1968 through a course given at Selkirk College, and has been personally involved with Dr. Velikovsky in the pursuit of the comet Kohoutek, which he subsequently followed to Hamburg, Germany. Presently Mr. Doran is, in his own words, "keeping bees and following the new anthropology". it is the latter subject on which he will speak today.

Mr. Doran ...

- Don Thompson
(The University of Lethbridge)

II: HONOURARY DEGREE AWARDED TO IMMANUEL VELIKOVSKY

On 19 March 1973 the General Faculties Council of the University of Lethbridge passed a motion unanimously recommending "that Immanuel Velikovsky be granted an Honourary Degree Doctor of Arts and Science at the Spring Convocation of 1974". This motion was forwarded to the Senate of the University for consideration. At the Senate meeting, held on 7 April 1973, the recommendation from General Faculties Council was approved and the Senate voted unanimously to award Immanuel Velikovsky the degree Doctor of Arts and Science, Honoris Causa. In this appendix are letters and addresses relevant to Dr. Velikovsky's appearance to receive this honourary degree.

April 12,1973

Dr. Immanuel Velikovsky
78 Hartley Avenue
Princeton, New Jersey 08540
U.S.A.

Dear Sir:

The Senate of the University of Lethbridge recently voted to accept the unanimous recommendation of our General Faculties Council that you be awarded the degree of Doctor of Arts and Science; the degree to be conferred at the Spring Convocation in 1974.

The presentation of your name stressed the quality of your life as a humanitarian, a humanist and a scientist. Many supporters among the faculty in the Humanities, the Social Sciences and the Sciences came forward to speak on your remarkable books and your teaching generally. You were seen as embodying our tradition of humane values, of intellect, of aesthetic sensitivity, personal ethics and of the transcendental dimension of scholarship.

The University wishes to confer this degree on you at its Spring Convocation in 1974, a year from now. We try to make decisions on the awarding of Honourary Doctorate degrees well in advance of conferring them. l will admit that we usually delay contacting the recipients until rather close to the Convocation at which the degree will be conferred.

In your case we wanted you to know of the award at the earliest possible time, particularly as we are pleased at the prospect of honouring you and we are convinced that you have not been properly honoured in the past.

Would you let me know whether you are prepared to accept the award of our Doctor of Arts and Science, and whether, all being well, you contemplate coming to Lethbridge to have the degree conferred on you in the Spring of 1974.

1 enclose a calendar of our University and some general information brochures to give you some familiarity with us.

Sincerely,

J. Oshiro, M.D.
Chancellor

April 30,1973

Chancellor J. Oshiro, M.D.
The University of Lethbridge
Lethbridge, Alberta

Dear Dr. Oshiro:

Your very amiable letter with enclosed printed material was unduly long in transit - I received it before the weekend. You may be aware that your General Faculties Council followed by the Senate of the University made a selection and an unprecedented decision in the Academia: I have not been yet honored with any honorary degree. This, however, was never a source of disappointment to me: I was aware of the revolutionary character of my studies and findings. Today these views of mine are no more so heretical much of what I wrote entered the textbooks and the curricula even if in some disguise.

If everything goes well, my wife and I shall come to Lethbridge a year from now. I thank you, dear Chancellor, the General Faculties Council, and the Senate of the University of Lethbridge.

Truly yours,

I. Velikovsky

III. Address to the Chancellor's Dinner
The University of Lethbridge Cafeteria
Friday 10 May 1974

Introduction by Dr. Ian Q. Whishaw, The University of Lethbridge:

When I came to the University of Lethbridge four years ago I found that the University was formed with a philosophy that it devote itself to a multidisciplinary approach to learning. A year later when we moved to this new campus, I found that the building was specifically designed to foster interaction between various academic departments. To go anywhere in the building one has to use the main concourse and this creates an interaction between people who would not ordinarily meet. Well, philosophy and architecture can help foster, but cannot completely guarantee, a and approach to learning. For someone like myself who has specialized for four years in the study of the hippocampus, the methodology which we were to use to foster a multidisciplinary approach to learning was not clear.

Last year it became a little clearer to myself and others after reading Dr. Velikovsky's book *Worlds in Collision*. We were struck not only by the imagination and scope of his ideas, but more specifically were profoundly impressed by the way in which he had gathered evidence from' such a vast number of academic fields as disparate as mythology, psychology, and physics. It was out of respect for his approach to knowledge and a belief that the ideals which he expressed were ideals which this University would like to incorporate that we proposed Dr. Velikovsky- for an honourary doctorate in Arts and Science.

We were aware at the time, and became more aware as time went on, that the nomination would cause controversy. After looking at the architecture of the building, however, we felt that a little controversy would not shake it off its foundations.

In regard to controversy, I have a story to tell. Cajal, a Spanish anatomist and Golgi, an Italian anatomist, through their studies

came to quite opposite ideas about how the brain was structured. In 1906 they jointly received the Nobel Prize, although the evidence overwhelmingly supported Cajal. What is so interesting in this case is that Cajal came to, and could only have come to his correct understanding by using the technological and methodological procedures developed by Golgi, and it was the controversy between these two men which led to the neuronal theory of brain organization which is the foundation on which modern neuroscience is established. What I think this shows is that we should not fear controversy or turn our backs on controversy, for controversy may be an essential ingredient for the advancement of knowledge.

I would now like to introduce Dr. Immanuel Velikovsky, who has had such a tremendous influence on our thinking over the past year, and who, I am sure, will have a continuing influence on our ideas in the future.

I give you Dr. Immanuel Velikovsky.

Dr. Velikovsky:

Chancellor Oshiro, President Beckel, Members of the Senate, Guests.

Originally I came to this University in response to the invitation from the Chancellor' who wrote explaining that the Senate had by unanimous vote invited me to accept an Honourary Degree in Arts and Science. I accepted this honour and responded that I would repay the honour by making this University the first and the only one from which I would receive an Honourary Degree.

I announced earlier today at the Cultural Amnesia Symposium it is very questionable whether I accept any other Honourary Degrees in the near future if they demand appearances and participation in various ceremonies or dinners.

Considering the time left to this mortal, considering the gift for procrastination with which I was endowed, postponing my work, postponing the publication of many volumes until this decade which will make me an octogenarian (in less than thirteen months), I believe I cannot permit myself the luxury of any more time away from my work, excepting to go to symposia.

After I accepted the offer of the Honourary Degree, a second invitation came, asking me to participate in a Symposium dedicated to one special aspect of that revolution of which I was by chance the originator - Cultural Amnesia. This Symposium has produced much discussion over the past two days, including two long speeches which I have already delivered today, so I will not fatigue either you, or myself, with a third long speech; I will only say that it has been worthwhile coming here, because I have discovered that a greater honour was accorded me here than just offering me a degree of Doctor of Arts and Science. It pleases me to know that in this University the various departments, which have been separated from one another by the very nature of their disciplines, have suddenly found a common ground. They have started to communicate with one another: physicist to historian, historian to biologist, biologist to geologist, geologist to astronomer, and so on. They have found a

common subject, a common theme, they have found a way to realize the purpose and idea behind the statement of philosophy for this University, which is to create an environment in which interdisciplinary synthesis can occur. And so here I have found that my work has brought ferment, and this is a great satisfaction to me.

I was pleased to find that scientific research has already begun in some of the departments, based upon ideas that were expressed in, or that followed from, my own work. I heard of the work of Dr. Stebbins (Department of Biological Sciences) and of Dr. Parry (Counselling Centre). if the ideas that these men have in their minds can be substantiated, they will produce great revolutions in their field of endeavour, and I will be very happy if I have in some way contributed to their beginning.

I asked myself the question: should I accept the Honourary Degree? If I agree to accept an Honourary Degree I lose my virginity. Until now, I had no Honourary Degree nor did I care for any; my only distinction was a gold medal from the gymnasium. I considered that my books were proof of my scholarship, my credentials. Those who read them can see from the references, which I give in the footnotes, the amount of work that has gone into my books. It is therefore of more satisfaction to me to know that in some universities there are special courses which discuss my work. I believe there are almost one hundred such courses. To me this is a distinction: Not every man who has an Honourary Degree (and some have fifty Honourary Degrees) will see his work studied during 'his lifetime. I thought I would die an iconoclast, and that the next generation, my children or grandchildren, would be privileged to see me honoured.

It gave me pleasure to find truth, or at least to search for truth; and what I found gave me satisfaction. And sometimes I even found pleasure by being able to hold back my ideas for many years, knowing I was the only one to possess this knowledge. This is part of the reason why some of my books are still in manuscript form when they should long ago have been in print.

And so I decided to come here to receive this Honourary Degree in the name of all those who were initiators, who followed their

pursuits in solitude - the iconoclasts, the scientific revolutionaries who are always in the minority: actually a minority of one when they started. If it were a question of opinion, if it were a question which could be voted upon, they all would have been voted down. if it had been a question of authority, none of them would ever have reaped the harvest of their pursuits, because authorities always oppose new ideas. To cite an example: Lord Kelvin, who was the most eminent physicist in the late Victorian days and in the beginning of this century, staunchly opposed the electromagnetic theory of James Clerk Maxwell. Maxwell's theory is the basis of the quantum theory, of the theory of relativity, of all modern physical theory. Kelvin had the lowest possible opinion of Maxwell's scholarship. And when young Rutherford became interested in the new idea of radiotelegraphy, proposed by Marconi, it was the same Lord Kelvin who tried to dissuade Rutherford: *Keep away, there is no future in it at all, the most that will be produced will be a connection between lighthouses where it is difficult to put in an undersea cable.* It was Kelvin who produced the calculation which made feasible the installation of the sub-Atlantic telegraph cable. Most of you who watch television or listen to the radio never think of de Forest or Marconi or the other pioneers who made broadcasting possible. Kelvin also didn't believe Roentgen, the discoverer of X-rays. Not only didn't Kelvin believe Roentgen, but he accused Roentgen of being a charlatan. I cannot remember exactly in what year I broke my arm while doing calisthenics in a gymnasium, but it was probably 1907 or 1908. 1 remember being brought to a doctor who had the only X-ray machine in Moscow. I saw my broken arm on the screen for myself. This happened about the time when Kelvin died, he might still have been alive. Certainly Kelvin did not alter his view that Roentgen was a charlatan to the time of his death in 1907.

I am here to receive this degree in the name of all those who started humbly, and who started alone, often working under very difficult conditions, who never received recognition or acclaim, unlike the pioneers I mentioned now. Somebody once said *A man of talent is one who can, but a genius is one who must.* Take the case of Dolomieu, the mountains in the north portion of the Adriatic Sea carry the name Dolomites in his honour.

Dolomieu served under Napoleon during the French invasion of Egypt. He was later imprisoned in Napoli for several years. There he wrote his classic work on geology without having either pen or pencil, or paper upon which to write. The only object he was permitted to have was the Bible, and so he used the soot of a candle and the oil of a lamp, and he wrote his famous book on geology on the margins of the Bible. Even under difficult conditions the one who is possessed by an idea must follow it. It is not by desire, by caprice, by a need of some external goal, nor for fame, or for riches, but because something leads him so that he cannot stand still, he must follow the call.

A man's name becomes great because of what he does, degrees do not make a man great. Darwin, who is not one of my heroes, had no degree, no doctorate in the sciences, no degree in geology or in evolution, or in paleontology, he had only a humble bachelor's degree in theology, nothing more. The lack of a degree did not mean that his ideas and his work could not become the dominant idea for four decades into the twentieth century. Since the middle of this century his ideas have started to give place to better ideas. I understand this University is not like other universities, and this is what made me accept its invitation. I understand there is a liberal spirit here, a spirit which is symbolized in this building. I attended several universities in the course of my studies. In my day, students wandered as they did in the time of Goethe, they spent two years at one university, two years at another, a year here, three years there, studying history, poetry, and philology, and politics, and other subjects, as they felt the urge. In earlier days it was even more so; but I do not intend to give you a long lesson in the history of scholarship.

I understand that this University will soon have a bridge, a bridge crossing over this valley and river, connecting the University with the town, and so both will prosper.

I think of the greater bridge that this University is already building. There are some innovators here, they are men who carry torches, who do not just repeat that which has already been repeated many times before. They are men who do not swear by *Verba Magistri*, the holiness of their school wisdom. They are men who do not say: *this is what we were taught, this is what we*

will teach in passing knowledge from one generation to the next. They are men who do not avoid the sacrilege of questioning fundamentals. They are like the iconoclast, who, by his very nature, must question. Without questioning there can be no progress, and without progress we would remain stagnated. Scholarship is a matter of questioning.

I understand that the policy of this University is to seek a bridge into the spiritual world, into the wider community, into other cultures. If it does, then despite the fact that this is a young University, scholars will flock here, and students will follow. The Senate, when it convenes, will not only have to advise wisely, but it will have to take some responsibility to see that things are added to the University that government and fee-paying students could not accomplish. Maybe not all of the Senators can, but some of them must. This responsibility should be 'a pleasant yoke because nothing can give more satisfaction than to know that you have helped to put together the material foundation for something that is growing spiritually.

Accepting the Honourary Degree will not, I hope, deprive me of companionship within the circle of those who died not having seen honours for their many works and achievements in their lifetimes. And so in their name, I will accept tomorrow the honour of being proclaimed and admitted to membership in the Convocation of this University as a recipient of your Honourary Degree. For this I thank you.

At the annual Spring Convocation ceremony held on 11 May 1974 Immanuel Velikovsky, M.D., was presented to the Chancellor of the University of Lethbridge, James Oshiro, M.D., by University President and Vice-Chancellor Beckel. W.E. Beckel. Dr. Oshiro conferred on Dr. Velikovsky the degree of Doctor of Arts and Science *(Honoris Causa).*

Dr. William E Beckel:

Mr. Chancellor -

Immanuel Velikovsky was born it Vitebsk, Russia, in 1895. His early formal schooling began in Moscow. Following a brief period of study at Montpellier, France, and travels in Palestine, he began pre-medical. studies in natural science at Edinburgh, Scotland, in 1914. When his schooling abroad was interrupted by the outbreak of World War 1, Velikovsky enrolled in the Free University in Moscow and for a few years studied law, ancient history, and economics.. Meanwhile, in 1915 he resumed work simultaneously toward a medical degree at the University of Moscow, and in 1921 he received his medical diploma.

The next few years Velikovsky spent in Berlin, where he was involved in the foundation and publication of *Scripta Universitatis*. In this series of volumes, conceived as a cornerstone for what would become a Hebrew university, contributions from outstanding Jewish scholars in all countries were published in their native languages and in Hebrew translation. The late Albert Einstein edited the mathematical-physical volume of the *Scripta.*

In Berlin, Velikovsky met and married violinist Elisheva Kramer of Hamburg. Later the same year, the young couple moved to Palestine and the doctor began his practice of medicine. For fifteen years this practice - first as a general practitioner in Jerusalem, and later, after psychiatric training in Europe, as a psychoanalyst in Haifa and Tel Aviv - occupied most of Velikovsky's time. Nevertheless, he published a number of papers on psychology. He also conceived a plan for an academy of science in Jerusalem and started a new series, *Script*

Academic, to which Professor Chime Weizmann, president of the World Zionist Organization, and later first President of Israel, and a noted scientist, contributed the first monograph in Biochemistry.

Velikovsky also had an idea for a book, and to complete the necessary research he decided to interrupt his practice for an extended visit to America. He arrived in New York in the summer of 1939, and plunged into his library research. The intended book had been conceived as an analytic study of Freud's own dreams, as recorded in his writings, and a comparative study of the lives of three personages - Oedipus, Akhnaton, and Moses - who had figured prominently in Freud's thoughts and works.

The research was nearly completed by the spring of 1940, and Velikovsky began to make preparations for the return home. Then, at the last moment before an already-postponed sailing, he chanced upon an idea that was to completely alter his life plans and keep him in America for decades.

Reflecting upon events in the life of Moses, Velikovsky began to speculate: Was there a natural catastrophe at the time of the Exodus of the Israelites from Egypt? Could the plagues of Egypt, the hurricane, the parting of the waters, and the smoke, fire and rumblings of Mount Sinai described in the Bible have been real and sequential aspects of a single titanic cataclysm of natural forces? If the Exodus took place during - or because of - an upheaval, perhaps some record of the same events has survived among the many documents of ancient Egypt; if so, might not such a record be a clue to the proper place of the Exodus in Egyptian history?

After weeks of search Velikovsky came upon the story he sought. A papyrus bearing a lamentation by one Ipuwer had been preserved in the library of the University of Leiden, Holland, since 1828. Translation of the document had disclosed an account of plague and destruction closely paralleling the Biblical narrative. Ipuwer bewailed the collapse of the state and social order during what seemed to be a calamity of natural forces.

In the fall of 1940 Velikovsky traced in the literature of ancient Mexico and China events similar to those described in the Old Testament. This confirmed his growing suspicions that the great natural catastrophes that visited the Near East had been global in scale. Immediately he expanded his research to embrace records of all races. The next five or six years he spent developing parallel themes - reconstructions of ancient political history and recent cosmic history - and as month followed month, the intimate details of a new concept of the world emerged. Two manuscripts were the product of his labors: *Ages in Chaos*, reconstructing Near Eastern history from -1500 to -300; *Worlds in Collision* documented the evidence and sequence of catastrophes on earth and in the solar system. A few years later the book *Earth in Upheaval* was produced presenting geological and paleontological evidence to buttress *Worlds in Collision.* Only in 1960, many years after his first research, did *Oedipus and Akhnaton* appear.

It would be an understatement to say that the Velikovsky hypotheses and theories convulsed the scholarly community with joy and enthusiasm. However, they did cause convulsions. Rarely has the scholarly scientific community reacted to revile and exclude an investigator or his investigation as passionately as it did in Velikovsky's case.

But the integrity of the man and the value of his thinking and his careful research had their effect and slowly but surely a more rational and appropriate examination and acceptance of Velikovsky and his ideas has occurred.

But this says so little about this remarkable man. Imagine, if you can, the incredible range of intellectual disciplines that had to be brought to bear on the development of his theories. Anthropology, archaeology, biology, chemistry, geology, mathematics, physics, history, sociology, psychology, psychiatry, ancient and modern languages, and philosophy. And Velikovsky was alone, an outcast. He therefore had to painstakingly develop intimate understanding and expertise in all the disciplines and to synthesize and distill their truths as they related to his ideas, his heresies. In a simple way it has been said of him, "He is a *rara avis*, a Benu-bird, that appears

occasionally in the guise of a natural philosopher, attempting to shed a little more light on our ignorance."

Mr. Chancellor, on the recommendation of the General Faculties Council, and on behalf of the Senate of this University, I request that you confer on Immanuel Velikovsky the degree of Doctor of Arts and Science, *(Honoris Causa)* in recognition of a man of intellectual vision and courage; a man who has indeed attempted to shed a little more light on our ignorance and who has challenged and stimulated in many parts of the world, the minds of philosophers, theologians, humanists, social, natural, and physical scientists in the constant search for the truth.

IV. Address to the Convocation Dinner Lethbridge Exhibition Pavillion Saturday 11 May 1974

Introduction by Dr. William E. Beckel, President, The University of Lethbridge:

We start this evening with an Honourary Graduate of the University of Lethbridge: Immanuel Velikovsky.

Dr. Velikovsky:

Today I joined the alumni. in the old country the usual way of celebrating the end of school was to sing *Gaudeamus*, which means: Let Us be Joyful, Let Us be Cheerful, Destroy our Notes, Burn our Books, and Listen no longer to anything which is serious or scholarly.

But tonight I wish to, say something serious to you, I want to discuss Scientific Conscience. I direct my remarks particularly to those of you who intend to continue your career as a student, to the few among the two hundred of you who are considering an advanced career in science, or in the humanities. My words come from experience. Although this will be a very serious speech, I promise you one cheerful note toward the end.

To be a scholar, or a scientist, means that you must dedicate yourself. Scholarship is not a part time job, it requires a lifetime of dedication. At some point in your career you have to specialize in some field that calls you, a field that leads in the direction that you desire to walk along the road of life. But do not specialize completely, prepare yourself by becoming acquainted with many other fields.

Read widely, keep an encyclopedia in your house, keep a volume close to your bed. Often when I cannot fall asleep, I read from my encyclopedia. I usually choose a short article, something that I know a bit about, but I'm not acquainted with the details, or something that I have heard about and seek a first glimpse of its essence. When you read a book, studying for some

particular purpose, make notes: preserve these notes, file them for the future.

Don't seek to be original at any cost but also avoid trivial issues. It is of no value to walk the easy road trodden many times by those before you. Select your tutors from those who can guide you with an open mind, who will not demand that you only follow the accepted views in blind fashion. Because science progresses by trial and error, look for new ways to do old things. Learn to ask yourself questions, and if someday you come upon what seems to you to be an original idea, don't rush to make it public, preserve it, carry it around inside yourself, give it time to develop and to grow in your mind. But don't follow it blindly because it is your idea and you wish to be original.

When you have perfected your idea, consult others who may give you good advice. if you find out that somebody has already proposed your idea, don't pretend that you were the first, give credit to those who were before you. But if you believe that you are original, try honestly to convince yourself that your idea is consistent with all the facts that you can collect. Don't hold on to an idea when the facts are against it, but do maintain your convictions if it is only opinions that are against you.

Have courage, and by all means do not fear crossing the barriers between different disciplines. Do not trust everything to memory, keep notes even as you develop new ideas. Keep a diary, it could be useful to you some day if you have to establish your priority to an idea. Think of the Chinese proverb *The Palest Ink Is Stronger Than The Strongest Memory*. And remember, ideas have their time. When it seems appropriate to retreat, retreat. When it is time to advance, advance. When haste is necessary, rush, for the appropriate moment is often short. But if the time has not yet come, stand back and wait for your time.

To illuminate this last point I will tell you a story:

> Once, at a railway station the stationmaster in charge of starting the train observed a group of three scientists returning from a scientific conference. They were intentively discussing something of great importance. They seemed to be there to board the train, nevertheless they weren't paying

attention to the stationmaster who was impatient to signal the train's departure. Finally the stationmaster could wait no longer, and so he signaled to the train, and the train began to leave the station. At this moment all three people ran after the train, two boarded it but one could not make it. The stationmaster turned to the one who was left behind and said: "Well, it's not so bad, two out of three made it", and the man answered: "But they came to see me off".

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End of

Recollections of a Fallen Sky

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Home