Decoding World History: The Eonic Effect

The Eonic Evolution Of Civilization

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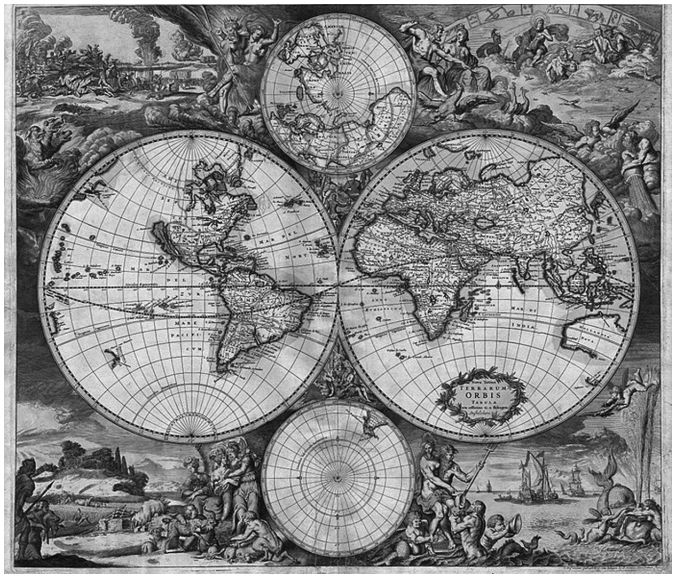

PREFACE

World history is an undiscovered country. Contemporary understandings show great confusion and make obvious the lack of a scientific perspective. Compared to the facility of physics, at least in the context of its mysterious mathematical methods that seem to develop in a just-in-time synchrony with the needs of new theories, the field of history shows no real reductionist resolution. The reason should be obvious: the issues of psychology and consciousness, values over facts, social existence, and religious versus secular discourses. History must grapple with the idea of freedom, physics must not. The idea of a science of history fails at the first step.

But all at once we confront a surprise in the reformulation of the question; the eonic effect, stumbling into an awesome mystery tour through ages in transition. One thinks of the classic phrase, voices of silence. We catch a glimpse of history's law of motion. But that perception is of a crude outer mechanics that evolves a much more elusive complexity that has a character not seen in physics, such as ethical and aesthetic aspects, the realm of values

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beyond facts.

This book will attempt to demonstrate this hidden factor and approach the issue of a science of history indirectly via a new discovery we have called *the eonic effect* as the first real step to such a science. As we enter the unknown, we find a phenomenon of nature that still eludes us with a complexity of a new order of magnitude. We often confront machines we cannot understand, but we can see what they do. The eonic effect in history gives us a glimpse of (historical) (macro-) evolution: a field of form effects operating over a species region. It is mysterious yet we can see what it is doing.

The eonic effect shows the (eonic) evolution of free agents inside a controlled system of transitions followed by their action outside the transitions. Such a system can result in disaster because the final result is no longer controlled by the larger system. This account can show multiple examples of this in the controlled action of a series of transitions which generate the 'evolution' of civilization. We are starting to introduce the terminology of a new kind of historical 'model'. We will show a distinct pattern of historical evolution as the 'eonic effect' and suggest its connection to the evolution or organisms in deep time.

Evolution, here the 'eonic' evolution of civilization, is hypercomplex and no simple theory is as yet available. This is evolutionary because it is a chapter in the saga of speciation: as 'evolution makes man', man begins to 'make himself' in the classic phrase, Man makes himself, but in reality with a hidden kibitzer. The data relating to a whole civilization, or a whole species, is astronomical. The term is apt because the problem we suspect is on the scale of planetary bodies as Gaian cradles of life, an evolutionary, planetary category.

We can accelerate the reader to a basic view of the eonic effect very easily as we then confront its hidden mystery. But this top-level view enters a vast field comprising thousands, millions, of books. We must assess the nature of high level summaries. We will invoke the category of 'evolution' as the right one, by definition, as a process of development. But the question of evolution is even more confused than that of history. Students of evolution have been living in a dreamland of oversimplification. In general, modern culture has encased public thinking in a constriction of ideologies and systems of propaganda.

Another interpretation could be that in the context of cosmological life the eonic effect shows how civilization is seeded in a sequence of guided evolution to which man must respond with his own free agency. The result

From *World History and the Eonic Effect:* WHEE

The legacy of modern historical research is an ambiguous one: the conductor's baton of the Universal Historian taps the podium, in a concert of art, science and philosophy, the theme of evolution rising aggressively to the fore, soon becoming the basis of all further secular generalization about human origins. Although evolutionary research has proved a success as a project of empirical discovery, beside its cousin, the archaeological uncovering of man's entry into civilization, the claims of evolutionary theory are much less certain than we might expect. Critics of Darwinism often point to the fossil record, upon which Darwin issued a claim of evidence to come, in favor of his thesis. This evidence would now seem less than clear...

... Now Gilgamesh speaks to us from the land of Ur and the chieftains of Upper and Lower Egypt are seen before their crowns are made one as the first Pharaohs. An age in itself has come and gone, glimpsed at its passing by the Prophets of Israel, witnesses to the vanishing Assyrians. A significant piece of a greater puzzle is joined to the form of perceived history, and the indirect signs of macrohistorical context suddenly show their presence. The elegant, yet fearsome, evolutionary unfolding of higher civilization in a cycling cone of ratchet progression all at once comes into view.

Wikimedia Commons, Public Domain File:Gilgamesh Sculpture.png

offers no final result but points to an empirical architecture for an historical dynamic. But that dynamic uncovers the real nature of evolution, whose scale is on the order of billions of years as the generator of species transformation. The Darwinian view is almost a parody of a real theory of evolution. It has corrupted the integrity of science with a social Darwinist ideology that is violent and suspicious as an ideology of capitalist depredation. It is used to refute 'design' arguments in debates over theology and secularism.

Nothing in our basic account requires the term/concept 'evolution'. The eonic effect is a non-random pattern established on its own terms. It would be simpler to bypass the demented debate over Darwinism, to simply look at the eonic effect by itself. But in the end, we must confront the confusion over evolutionary theories because our argument shows the way out and connects 'history' and 'evolution' in a new way. We can thus argue that the issue of a science yields to a schematic of 'evolution' as the correct category. But that category has no precise meaning as yet, as the legacy of Darwinian fantasy theory collapses. The analysis here moves beyond the subject of Darwinism and its claims for natural selection, now under assault as pseudo-science.

In addition, we will attempt a critique of Old Testament historicism and its account as Biblical history and religious belief. Strange to say, the Old Testament saga stumbles into the eonic effect and creates a kind of theistic cargo cult of its action. But that result was always a set of confusions about historical dynamics as theistic mythology. Two centuries after the Enlightenment culture is still floundering in a mythology of theistic action that belongs to another age and continues to confuse as a form of exploitation and mind control. The Old Testament is an exciting saga, seen rightly. But as we reexamine the history in the context of Biblical criticism a new and even more remarkable picture emerges. Our account is neither theistic nor atheistic and must deal with the emergence of world religions of both types and demands a new kind of higher objectivity.

> The reader can proceed to the next chapter. Our text is a short book inside a longer one: a short overview followed by 'Endnotes'. The reader can stay within the short book to start and that amounts to about a fifty-page booklet.

Endnotes:

This account will be short and can also be used as a commentary on *World History and the Eonic Effect (WHEE)*. But it has become a book in its own right and stands by itself as an empirical depiction of the driven character

The Eonic Effect: the hidden structure in world history

Our snapshot of world history will demonstrate almost without trying the presence of a non-random pattern of universal history by simple inspection. This pattern of self-organization can give us an empirical basis for considering the questions of human evolution. Instead of speculative theories like Darwinism we can discover a sense of universal history, thence evolution, purely empirically.

Our suspicion is confirmed that high-speed change can occur on the scale of just a few centuries, witness the Axial Age. And this effect shows us that evolution is hiding behind history in the form of a series of intervals of rapid emergence. World history yields its secret to simple periodization and shows from the invention of writing a clear developmental sequence, with a question mark about its probable source in the period of the Neolithic, the natural starting point for the rise of civilization. The great clue of the Axial Age suddenly provided the gestalt of a larger system at work. The Israelites were right, there is a process of greater evolutionary dynamism that frets the universal history of man.

We can call that sequence of three transitions and the epochs in between them the 'eonic effect', as a sequence of three epochs, and note the way that this pattern suggests 'evolution' at work, 'evolution of some kind'. It is at first illogical, it seems, to confound evolution and history. But with a little reflection we will see, first, that the two must be logically connected, and, second, that the data we are discovering directly confirms that logic. This evolutionary sequence is a robust empirical foundation for understanding world history, in the context of evolution.

of 'historical evolution'. The account will accelerate the reader to what we call the 'airplane' view of world history and its eonic effect, or better 'eonic effects'. From there we enter into a more detailed account. It is very easy to present the eonic effect, but not so easy to appreciate its secret or fully grasp its implications. Our account then leaves the reader at a sort of gateway to a model of the eonic effect which enters into a vast field of almost endless detail. That model is ultra-simple as a chronology, outline and bibliography. The reader will be referred to the text of WHEE for additional bibliography and study resources, and that includes other books, the trilogy of *Descent of Man Revisited*, *Enigma of the Axial Age,* and *Last and First Men*. All the materials have paperback versions at Amazon along with Kindle versions and free online PDF versions at the author's websites.

The appendix contains an outline of bibliographical resources. Those resources are overwhelming and here we will consider at most a few relevant texts as we go along. An appendix will include the outline of eonic history and resources for study. A new possibility has emerged: using the Internet to study world history. It cannot compare to a good library, usually university libraries not open to the public unless enrolled. But that is changing and the study of history with this new tool is coming into being even now.

We set the right note for our subject with an essay by Kant and his challenge to the future as to history. We can well claim the eonic effect shows a solution to Kant's challenge. Kant's thesis asks many questions, such as the evidence for 'Nature's Secret Plan' in the process asking for the resolution of many queries, such as the progression to a perfect civil constitution. This was the 'end of history' in its original, still coherent form. This text is not an exposition of Kant's philosophy but will try to cite multiple views (simple realism, transcendental idealism, absolute idealism, historical materialism, etc...) ask if the mystery of noumenon and phenomenon shows an historical dynamic hidden from view.

The essay by Kant is the source of the 'end of history' debate and its confusion and our discussion will show the teleological framework behind the progression to a perfect civil constitution. In the process we can show an answer to the query as to 'Nature's Secret Plan', a somewhat provocative term but more or less clear. Our model proceeds directly to an answer there. That raises the question of ideology and historical viewpoints, objective or biased. Our model will show the limits of objectivity when the observer is inside the system in question: our ideologies are themselves products of the system. Defining objectivity is not so simple since we are creating the future history of that system.

Democracy, liberalism, and, to the left, the socialist ideal are all 'eonic emergents', output of the system in question, and our bias as to these issues needs examination, but fascism, reactionary anti-modernism, and religious fanaticism are not such 'eonic effects' and we are justified in our preferred perspective, if we can do justice to it. A hidden chapter of eonic history is the struggle of democracy to be born. Another is the struggle against slavery. World history has too often betrayed its better logic, clearly prompted in the eonic sequence. This ideological slant would seem ideological and they are because ideologies are products of the system in question, and correlate direct with its timing mechanism.

Kant's challenge and our discussion of it are not explications of his great philosophical viewpoint of transcendental idealism. But that viewpoint enters the discussion in a different way in the complex 'dialectic' of materialism, idealism, and the quest for a foundation for our historical discussion. But Kant leaves us with a set of questions about history: is there a noumenal aspect in history that veils its core aspects or phenomenology. We will adopt a rough materialism here but in the age of quantum field theory even that is beginning a period of equivocation.

We live in a period of near crisis of public ideology as the fields of religion, secularism, and science founder in obsolete paradigms in the search for new forms of explanation. If our audience points to the secular humanist, we must find a larger context for that stance, which is a good vehicle, subject to critique, for study. But that perspective is too limited, perhaps. Secular humanism is about modernity, and that is a vast field, yet one directly correlated to the eonic effect. As the subject of man's evolution begins to crystallize we will try to show the unity of history and evolution in a general account called the Great Transition. The discussion is made repetitive as the basic thesis is repeated with ever greater detail in each chapter ending with a guide to a new kind of model and the passage to an immense relevant literature. The strategy to first get an 'airplane' view of world history and then to stage a study guide to a more detailed perspective.

Modern culture is essentially without a coherent historical narrative in a battle of propagandas as we imply but bypass the current postmodern critique of metanarratives. The basic such 'metanarrative' is the category of evolution and the rapid emergence of planetary civilization over a 'mere' ten thousand years. We need no apology to postmodern cavil and might point to the ideologies of 'infranarratives' as flat history, the realm of the Flatlanders. But the critique of metanarratives is useful and relevant given

the ambiguity of our result. However, there is only a modern period, the postmodern in our take is a phantom. In our model, the modern lasts until 2400 years after 1800, for reasons we will discover. The postmodernist would then be some sort of 'dropout', like a vagrant Buddhist. But this is preposterous and we may be at the point of passing out of the eonic effect. So we welcome the postmodernist to the modern world and any critique there but stripped of its label.

History has meaning, and passes from mechanics to the story in a drama of active agents. We are immersed in its action, and its generation of ideologies. The eonic effect points to its own such critique: ideologies are output of system action, the most inspiring if problematical being the idea of 'freedom', to the Greeks '*eleutheria*', with its mystery of counterdynamics and political slogan. We must consider if 'objectivity' is possible if our perspectives are system generated.

> A core idea is the near metaphysical idea of the 'evolution of freedom' first emerging as the locomotion of the animal, and the rising degrees of autonomy via primates and then the hominid. The term is metaphysical, but has a broad definition that can ground its meaning in the context of evolutionary sagas. We considered not using the term 'evolution' given the confusion, but history is connected to evolution from the dawn of the appearance of the animal, whose locomotion is primitive history inside evolution.

We may confess to ideology, but we may also see that, for example, 'democratic trials' are injected by our macro system. We confront a paradox, is induced 'freedom' really free? This idea gives a subtle clue to the eonic effect as we discover how induced freedom must chance the future alone. This mysterious 'eonic effect' is more cogent and less strained than the defunct 'end of history' argument as a classic fumbled football of rival ideologists. The idea of the evolution of freedom is metaphysical, but in practice we look at 'system action', 'free action'. The 'end of history' has a 'most probable' outcome: decline, neo-barbarism and technological fascism.

And that leaves the ancient question 'Who am I' as the challenge to understand man and his psychological mystery. That mystery is the question and answer of world history and beckons to a new understanding of modernity and the field of 'last and first men': the autobiography of a species hominid as he confronts a cosmic backdrop of his home planet. We have no assurance is man will transcend his 'original sins' to become a citizen of some cosmic unity and the record of history must speak for itself in contradictory ways. Modern society has no historical perspective, and in

Directionality, teleological systems and free agents

World history shows a teleological process (by inspection) in the evidence of directionality, in a discrete/continuous series of so-called transitions and at the same time the splitting of its mainline into parallel sectors. The obvious interpretation is developmental 'evolution' driving toward global integration. The mainline shows direction, the sideline integration of diversity. This teleology reconciles the constrained ends of a system in a general concept of evolving freedom as the directional process ends and a free agent emerges in some sense.

A process is 'discrete/continuous' if discrete (viz. numerical) intervals are embedded in a continuous line:

_____xxxxx___xxxx__xxx___xxxx_____

The eonic effect occurs through these discrete transitions in a sequence that represents 'evolution'.

Many systems are deterministic, but many systems exist that reconcile free agency and the action of a system. A computer mouse is the simplest example: the mouse is deterministic and depends on the free agency of the user. The eonic effect shows the action of free agents inside a directional system. Controlled agency can't be 'free', and our system shows the alternation of controlled agency followed by free agency. The free agent can carry out the implications of a directional system that lapses from system action into free agency.

addition has no real psychology of man. Modernity is still a work in progress.

The book has two aspects: provide an 'airplane view' of the eonic effect and then create a way to study the phenomenon in greater detail in terms of a model. The first is deceptively simple, followed by increasing complexities. This Preface states the basic issue and deals with issues of science in the age of the Quantum. Two centuries after the Enlightenment the issue of Biblical history remains to confound culture and politics. But the rise of Biblical criticism has been decisive. We can provide a far more exciting account of the Old Testament than its stalled search beyond paganism for the pantheon of 'one god'. The Introduction resets the starting point and explains our core account. From there the issue of random evolution is critiqued as world history is shown to exhibit a smoking gun, a non-random pattern. In one way our job is done. We then complete the 'airplane' view in the discussion of increasing detail in the recurrent restatement of the eonic effect. We then stage a gateway to a new model of history in an Appendix by asking to what degree we can reach the facts of history in the exponentially expanding data set. We must rescue the airplane view from hallucination, and then confront the unreachability of an empirical subject with thousands, finally millions of adjunct data resources, books. But the same is true of the evolution or organisms. We will find a strange resemblance between the two. In addition, the dragon of teleology will breathe fire on discussions of 'flat history'. We can sense the reality of teleology but the category seems an orphan of science. The eonic effect points to a teleological factor and this should be a naturalistic aspect whatever its metaphysical liabilities.

We conclude with a suspicion the dynamic of the eonic effect is relevant to the early evolution of man. We indulge a quaint portrait of the hominid homo sapiens as a proto-shaman with new gifts of consciousness. Man begins and ends with the mystery of that 'consciousness' as he confronts a larger galaxy with a question mark. The question arises, has man completed his evolution? It turns out to be related to another, what is the outcome of the modern world and will man pass into decline and fall as in greater antiquity. Man wishes to pass into the greater universe in search of alien life, but perhaps he was visited so, as the eonic effect itself, a dynamic with a planetary theatre and a kind of Gaian melody.

INTRODUCTION

The 'eonic effect' is the smoking gun for a mysterious dynamic in world history, and a resolution to the mystery of the evolution of Civilization. Further, its implications are essential for understanding modernity, and more so the future of human evolution. If civilization emerges in a hidden evolutionary script, what happens at the end? We fail to see the hidden action of a strange 'macroevolution' at play in the emergence of civilization.

We live in a period when the data arriving from archaeology has exploded and greatly extended the range and factual basis of our knowledge. The result is a strange signature emerging out of fixer, still blur, yet increasingly definitive. But the study of world history is hampered by a host of ideological obsessions that have left in its wake a limited set of perspectives. Modern society is without a sensible view of history.

Darwinism, religious mythology, economic ideology reign as forms of propaganda. The eonic effect and its model can fill that void without provoking speculative theories or religious dogmas. In a strange irony, the data of the eonic effect is so complex we are stopped far short of a theory and can use the empirical foundation as a useful overview of world history, but one that shows an implicit structure. The result can point to the problems with evolutionary theories.

We raised the issue of the idea for a science of history as it lurks in the background, but its confusions have often muddled the study of history still further. History is not, or not yet, reducible to physics or a set of causal laws in the conventional sense. The same could be said of a computer mouse and its use: we see a dual/tandem pairing of a causal system and agent who expresses optional behavior.

> The first idea of our model is the relationship of 'system action' and 'free action', or free agency. Another is the idea of a form factor. The idea of a novel is such a form factor. To realize such a form factor a free agent composes a specific novel.
>
> Organismic evolution is a fantastic version of a flying factory that can direct a species area into new body formats in the interaction of form and its realization as species generation. This process is far beyond current technologies.

Although questions of methodology, scientific or otherwise, are of great interest, the eonic effect is an empirical data set which poses a question. We assume a reduction to science as a potential but in fact, the presentation of the data completes our objective. No theory of evolution/history has ever succeeded in the sense of finding laws. Our approach can find snapshots of a dynamic. The effect points to global data over a period of ten thousand years, a non-trivial object of analysis so far beyond our methods. But a descriptive model can show the dynamic in action, whatever its hidden aspect. A very good case can be made that some analogue of this process directs organismic evolution.

> No one could find a science of history because they couldn't even define its starting point or what data was under analysis. The only solution is to make the onset of life on earth, or beyond that the account since the Big Bang, the object of analysis. Then we consider the subject to be 'evolution/history' as one subject, This approach allows us to define history in overlap to evolution in the emergence of active agents. Another approach is that of relative beginnings. For a while the Big Bang was an absolute beginning, now it seems it might be another relative beginning. Our subject starts with the relative beginning called the 'rise of higher civilization'. But the rise of the Neolithic and/or the evolutionary emergence of homo sapiens are still other relative beginnings.

Any science of history must explain the eonic effect because its effects can be detected in history. Although we can't find laws of history we can see something like them in action in their outer aspect as instead evolutionary transformations. The best term for that is 'evolution', what we will call the

'eonic evolution of civilization', i.e. the series of active intervals driving the development of civilization. But evolution in this sense is unlike anything we know: its realization is both system induction and creative free action. The issue of teleology enters.

History is the study of free agency, evolution the study of its emergence. History is inside evolution because it evolves free agents whose actions are 'historical'. By this reckoning the animal is the first primitive historical agent.

The result resembles 'punctuated equilibrium'. The term fits, but we won't use it: we must be clear that the term has no real definition: it is an engaging metaphor of a 'principle of sufficient reason', a higher level version of explanation, whether causality or not. It is based on the idea of sudden species change and then stasis. It was a good guess and the fossil record suggests just that. The eonic effect will explain or offer a meaning to 'punctuated equilibrium', in an historical context, not the other way around. The idea of sudden changes followed by a steady state is useful. But the idea was corrupted by Darwinists and we should be wary of using it. The eonic effects shows a pattern of well-placed 'punctuations' across world history. We call these punctuations 'transitions'. The rise of the modern shows such a transition: they reveal themselves by the density of their innovations and rapid social change. Between ca. 1500 and 1800 the medieval world passes away as a whole new form of civilization appears at lightening speed and thousands of new innovations occur.

> Our account presents the so-called 'airplane' view: a progression of epochs from the era of Sumer and Dynastic Egypt, then the multitasking classical period of Archaic Greece, 'Israel', India, and China. The modern period.

The idea of epochs borders on the speculative: there are so many ideas of cyclical history, all failures, that we are wary of such a term. But it can be useful as a way to displace that legacy of crackpot theories. Problem solved, finally.

Our model is a threshold empirical guess: three epochs, the last just under way:

the epoch in the wake of Sumer/Dynastic Egypt after ca. 3000 BCE
the epoch of the Axial Age after 600 BCE
the modern epoch after 1800...

Each starting point is prefaced by a transition that shows controlled agency followed by pure free agency.

The final modern transition is the one in whose wake we are immersed.

Our logic suggests a transition prior to 1800 and that interval us clearly visible in the record.

We must suspect that our time period shows the end of the 'eonic' series and that an evolutionary interval has completed leaving man after controlled agency to the relative free agency of an historical agent moving away from an evolutionary transition.

The reader can jump to the next chapter.

Endnotes:

History shows the transformation of values, consciousness, and knocks at the door of metaphysical mysteries science excludes. It invokes the mystery of creative action. No numerical measures of the braiding of facts and values are possible apart from trivial examples. Further, the debates over a human psychology lurk with the questions of free will, self, and their relation to broader category of cosmology. Evolution in our usage points to what so far is unknowable as invisible: species change (as a whole or via subsets) over a region in a field realizing an invisible 'form factor'.

> The era of the Cambrian gives itself away as exploring a proliferation of parallel taxa suddenly appearing in the record...We get a tantalizing glimpse of a species 'form factor' behind the scenes.

A good example of a form factor is the 'idea' of the 'novel' in the mind of a free agent, i.e. novelist, as this is realized in a specific form as a given novel. The distinction of free agent and system form factor works for history, with a suspected variant for evolution of organisms in deep time. The distinction of macro and micro evolution is implicit here. The form factor is like an idea: it is not temporal, and a kind of macro entity. Micro evolution is the reification of the form factor in time and its reaction to or adaptation in actual environments. Macroevolution and microevolution are useful aspects we call 'evolution'.

In the evolution of organisms, the macro process realizes form factors while the micro tests them against the environment. In history, the macro generates the seed innovations that are then realized as microevolution by free agents. This distinction of system action and free action is crucial to understanding historical evolution. Aren't these two different things? Perhaps, and yet they show a hidden connection: the evolution of animals shows the emergence of freedom while history shows its exercise as an animal now free agent making history. The different aspects of evolution

Eonic Effects

The eonic effect points to a remarkable discovery of a mysterious dynamic in world history, but its study tends to be made difficult by the need to study multiple times and regions and in a comprehensive reading of relevant books. The task can rapidly expand into a large reading list of texts on the whole of the known history, and that unknown. We can try here to simplify the task and give a rough indication of the significance of what we call a 'nonrandom' pattern. The latter is known to us intuitively: whenever something disturbs as stead state field it draws our attention, we 'look' to see what is 'causing' that. A non-random pattern can be another causal event, e.g. a wave across a calm sea, or a willed event: we hear a rustling in the bushes in a near by woods: is it a breeze, perhaps a bandit in hiding.

Googling historical topics

The study of world history is made difficult by the logistics of study and the many ideological barriers put in its way. The price of entry is a bibliography of a thousand books, equally spaced across historical space-time. The question of science also enters, as it should, but that complicates the question with issues of the nature of science and the place of causality. We must consider the issues of modern science, including the quantum area.

As to the study of history, the best resource is something like a university library, but now the question arises, can we use the Internet, viz. Google? Not yet, but it is getting better all the time. Google books attempted a universal 'net library', but was legally challenged. Even so it has information about a vast number of books. At each stage you can google given topics with reasonable success. For example, try googling 'world history', 'universal history', 'science or philosophy of history', Archaic Greece, Sumer...

The world's best information appliance is a speed reader with good sneakers who chases down information in the stacks of a large library: in a bibliography of ten million books, each with ten footnotes, and each of those again, the book for each footnote will likely be less than a quarter mile away, and our researcher must proceed with haste, forced to a measure of calories per footnote-mile and our researcher needs a lot of organic energy bars in his book bag.

are thus no contradiction.

> Theories of evolution are not available to us as yet. The Darwinian theory is a socially controlled propaganda that has in reality made a laughing stock of biological scientists. Creationist accounts are equally dubious. The eonic effect shows the awesome mystery and potency of evolution that is a cosmological process that seeds life on planets, generates speciation, and concludes the speciation of homo sapiens with the generation of civilizations. Take the pledge, drop the pretense to theory, which has generated social Darwinist violence.

The only usable tactic is the non-linear co-action of some kind of 'system action' and an agent's free agency. Such dual systems seem arcane, and then we realize such systems are pervasive and that we already understand. A car and its driver are perfectly good examples of the distinction of 'system action' and 'free action'. The study of world history must open to its better 'half ', the realm of values beside the realm of fact. With one exception the realm of values has no dynamical or causal scheme: the idea of freedom appears to pass in practice between a causal substrate and a value, and moves to connect history and evolution.

The current time-frame shows the sudden onset of challenges to the reigning paradigm of Darwinism, that is, selectionist evolutionism. The theory of natural selection has been drafted into use as a semi-theological concept falsifying theories of 'design'. The unconvincing and finally pseudoscientific cast of the idea has finally if anything strengthened the opponents of naturalistic evolution. The presence of design in evolution/history is simply a given, and not grounds for theistic interpolations. The argument by design, exposed by the philosopher Kant, is the strategy of using design facts to claim theistic facts, but the whole game is fallacy.

> The reader might profit from an introduction to Kant's critique of metaphysics in its simplest form as an account of the antinomies of reason. We have already touched on one such: there is a beginning in time, there is not beginning in time. The issue of transcendental idealism haunts the basic framework of science by showing how our normal range of thinking is beset with contradictions.

> **Nature's Secret Plan** Kant's famous essay also challenges us to uncover 'nature's secret plan', and the eonic effect powerfully shows that plan in action. This language is suggestive of design thinking, and we should be wary of the sense of 'agency' that we ascribe to 'nature'. However, in practice the point is clear, and we can suddenly catch a glimpse of what can only be called a hidden

Kant's Challenge: Nature's Secret Plan

There is a simple and elegant way to frame our subject: there is a classic essay of Kant on history where he is wise enough to ask questions, instead of providing answers. His essay essentially asks for a dynamic of history, and any implication of teleology, if any. We call that Kant's challenge. The eonic effect provides a first true answer to that query, despite a hat tip to Hegel, and his nemesis, Marx. The historian H.A.L. Fisher perfectly expressed the negative here:

...the historian H. A. L. Fisher, in one of the most quoted statements of modern historiography insists that there is no meaningful structure to be found in the randomness of historical process:

> Men wiser and more learned than I have discerned in history a plot, a rhythm, a predetermined pattern. These harmonies are concealed from me. I can see only one emergency following upon another as wave follows upon wave, only one great fact with respect to which, since it is unique, there can be no generalizations; only one safe rule for the historian: that he should recognize in the development of human destinies the play of the contingent and the unforeseen.

The philosophy of history is born, reborn, at the dawn of modernity as a fellow traveler, becoming visible as early as the sixteenth century and finds its classic realization in the writings of the philosopher Kant, in his essay *Idea For A Universal History from a Cosmopolitan Point of View:*

> Whatever concept one may hold, from a metaphysical point of view, concerning the freedom of the will, certainly its appearances, which are human actions, like every other natural event, are determined by universal laws. However obscure their causes, history, which is concerned with narrating these appearances, permits us to hope that if we attend to the play of freedom of the human will in the large, we may be able to discern a regular movement in it, and that what seems complex and chaotic in the single individual may be seen from the standpoint of the human race as a whole to be a steady and progressive though slow evolution of its original endowment.

This hope is confirmed by the pattern we can exhibit, and we can easily claim the eonic effect a resolution of Kant's Challenge.

design to historical evolution.

Progress Toward a Civil Constitution Another aspect of Kant's Challenge is to document the 'progress toward a civil constitution', and the eonic effect powerfully shows a strong correlation with just this, and we have just suggested that democracy itself is bound up in the eonic sequence, as it seems to generate the first beginnings of democracy in both the Axial Age and in modernity (which makes us suspicious that the earliest stage of civilization shows an earlier phase of its emergence).

The study of the eonic effect can help to reorient the study of evolution via the study of the 'evolution' of civilizations, and quite possibly a hint as to the evolution of organisms. A process of evolution is not intuitive or visually objectified. The eonic effect can help to see a process in motion over large time scales, something we don't 'see' as an object. Evolution occurs over a region where a species is present and in the end the organism and its culture/region is part of the process of 'evolving'. It is more than genetic. We suspect in fact that the two, organism and species/region (civilization) are the same or analogous subjects, and that the process of evolution might itself evolve as a kind of 'learning artificial intelligence' in novel situations. The latter notion is speculative and not a part of our model. But the advances of artificial intelligence offer hints to the question of evolution, perhaps.

The current genre of Big History, history since the Big Bang, we can take in stride, and in a nod at classification annex it to our subject, in the context of the Big Bang, if real. If the idea of relative transformations is relevant to history it is also a challenge to some absolute t = o in the 'Big Bang', still another relative beginning. Either way, we can take the Big Bang entry to Big History as least a relative starting point. We will include two short sketch outlines of 'Big Bang' history, from *World History and the Eonic effect*. The Big History genre is sandbanked in Darwinism, which has spoiled its perspective. An examination of the fate of the idea of 'evolution' might alert us to the difficulties of theories about history. The reverse is also true, and we can suspect that if we find 'evolution' in history it can tell us something about evolution in deep time. The idea of 'relative beginnings' is important for our model, and is an idea some find confusing even though they use it all the time: Monday is a relative beginning in a week and a week is a relative beginning in a year.

The vehicle needed is nothing more arcane than the 'philosophy of

The Evolution Debate

One the mysteries of modern science culture is the way the whole profession of biology has been stuck on a thesis as silly as natural selection for over a century. It is a warning that modern culture tends to suffer multiple ideological straightjackets rigidly enforced.

From WHEE

The debate over evolution has continued since the time of Darwin without resolution, in part because it is a metaphysical contest that is conducted beyond the limits of observation. The claims for natural selection have turned into an ideology short of real science, a kind of metaphysical reductionism. The result has thrown the study of history into confusion, and handed an ideological pseudo-science to many with Social Darwinist agendas. History should instead be the antidote to this kind of speculative excess, for it enforces the discipline of observation at short range, a century or less, something entirely absent in the study of deep time where generalizations about immense intervals of time are taken for granted without direct empirical observation.

A devastating question haunts standard thinking on evolution: what if the real force of evolution acts intermittently at high-speed over a range of mere centuries? The vastness of deep time would swallow up such brief episodes and leave no trace whatever. As we examine world history precisely this possibility becomes confirmed, and it shows one of the most obvious solutions to the evolution mystery...

history' where orphans of historicist scientism are banished by default, next to the idea of 'Universal History', the history of everything. There the idea of freedom lurks prior to its entry into the realm of fact. We can align our discussion to a discussion of Kant's classic essay on history, *Idea for a Universal History...* The question of science remains crucial but the example of causal determinism tends to confuse thinking as we misconceive the crucial issue of historical dramatics: the presence of actors, or free agents. Causal reductionism in the classic sense fails because historical agents have choice and can choose to falsify a causal prediction by saying and doing otherwise'. Choice itself might have some causal explanation, another question. History is the chronicle of free agents, whatever the issue of free will. The eonic effect shows us the interaction of system and its free agents.

In the era of quantum physics we see that the reign of the reductionists has ended and the Newtonian empire has collapsed. The riddle of human psychology remains, and is connected to physics, but the field of our subject will offer its own answers. Modern mindfulness movements have reminded contemporary men of the distinction of consciousness and self-consciousness, one with many terminologies and its own universal history. Modern man lost something the eonic effect shows: a whole civilization devoted to psychological regimens, viz. the worlds of Hinduism and Buddhism, a product of evolutionary feedback in the so-called Axial period.

The explosion of knowledge has suddenly produced an empirical insight into the question of historical dynamics, and the result is an exotic but empirical interpretation of the classic question, What drives history? But like a three-body problem with no general solution beyond an empirical trace, we remain in the realm of facts, to the degree we can resolve them. The long delay to any answer to the question now has a simple explanation: lack of data, and that over a sufficient period of time. The answer to this question suddenly stands out as 'obvious': we see a series of periods of concentrated innovation, like transitions, in a series, periods of fall off and decline, and a strong suggestion of directionality. We knew this all along, but in fragmentary form. The issue is simple: to observe a 2400 cyclicity with a special starting point, you need about 5000 years of data. We crossed such a threshold in the nineteenth. A critic may say that the data of the Axial Age is coincidence, and that the three term sequence is not even that, more like two term sequence with three transitions, and the third by supposition barely underway and subject to our manipulation.

The eonic effect is visible for the first time because a system in a

> frequency mode of 2400 years exhibits its pattern as three turning points after about five thousand years, roughly the period since higher civilization's onset in Sumer and Dynastic Egypt, and, crucially, the invention of writing. The effect began to be noticed in the nineteenth century as the Axial Age. The larger pattern only with the author's work.

We should welcome skepticism, but a pattern of coincidence speaks for itself. The student is free to challenge, falsify or review such assertions: the evidence is at a magnificent point of first visibility and is arguably still at a threshold as an hypothesis. But the pattern of non-random evidence starts to exhibit its own proof. We are stuck with the evidence of the eonic effect. What does it mean? This account is designed to be short, and the reader is given a short introduction to the 'eonic effect' with an extended survey of a model in an appendix inserted as a chapter in mid-text. Since full study of the literature of history rapidly invokes an intractable logistics we must be wary of the high level views we adopt to refer to the eonic effect.

The real issue is the acquisition of factual knowledge and the explosion of research that has transformed our view of world history. Although we have immense data banks and their technology, the old-fashioned art of reading has not changed, and in a field where the right measure is a thousand books, we enter a crisis of factual transmission. We have crossed a threshold of knowledge that is set to transform our basic gestalt of the rise of civilization, but the grand narrative it told is in the stacks of large libraries. The result will change not only our view of the past but our sense of modernity; our objectivity is thus also an ideology spawned by our discovered dynamics. The result will leave us with a sense of the future taken in a new way and with a warning challenge to the dangers all too visible in antiquity of decline and fall in the realm of civilizations. A sense of future hopes mixes with a sense of foreboding, has man's action in civilization wrecked his evolutionary transition?

The eonic effect is easy to state in an airplane view but then spawns a query as to facts in detail on a vast scale. The reader can finish our short account very easily but is strongly encouraged to delve into the 'new model of history' with its expanding take-off into vast realm of historical data. And the text will lead seamlessly into the text of WHEE itself. Further, the issue of reading books of history arises as a challenge to a culture almost in the dark on even the most recent history. We should consider that our subject is to be a novelty of the Information Age and the access to increasing knowledge has been revolutionized by new technology, but the core disciple

remains what it was, before Google: books, libraries, and readers.

Any account of world history nonetheless should define itself in terms of the background of physics. But our generation has entered a strange period of the mystifications of the quantum era, now further extended into the realm of Quantum Field theory, and beyond that the realm of String Theory. *Einstein's Unfinished Revolution: The Search for What Lies Beyond the Quantum*, Smolin discusses the realism/antirealism debate in quantum mechanics, *Quantum Enigma,* by Rosenblum, Kuttner, touches the mysteries of QM. It is clear that physics cannot offer a reductionist standard of causality for history. In addition, the Darwinian standard of natural selection is laughable. So we are alone, three blind mice re: physics and the dance of methodological mad hatters. But the mysteries of QM and spooky physics hint at a resolution of the high-low materialism/consciousness pseudo-dilemma.

Even as the reign of reductionism passes, we end up wishing we had better guidance from fundamental science. The subject of history is stranded and must study its own foundations. Where once the Newtonian reign over history sought causal laws, now we wonder if the mysteries of consciousness are a topic of physics. Although the interpretations of the quantum frequently border on the extravagant it remains true that the issue of free will and consciousness would seem now open-ended in that theory's attempt at closure. The fanatic rejection of free will falls on deaf ears now. And the phenomenon of 'entanglement' as such, as though to defy space-time itself in a kind of noumenal void, presents an obscure field. We will resist such excursions into crypto-metaphysics, but the question of the agent in history remains stubbornly unresolved, yet direct to observation as just that 'free agent' whether or not that implies free will. The arguments of Kant here remain to be reckoned with.

We can inject our own 'extravagant' version of QM by wondering if the realm of spooky physics connects 'mind' beyond space-time in the resolution of the chaos of psychological (pseudo-)theories. And we must wonder if evolution's unseen aspects find any clarification in this context.

We will remain neutral and therefore speak in terms of 'free agency' as the realm of observable choice, free will or not. In many ways Kant is a better guide and his ethical studies, however flawed show the place of freedom and ethics in relation to man. History has a hidden 'moral' compass and we confront the Machiavellian political world with no self-defense at the

capture of political society. Objectivity is difficult since we are immersed in the system under study, and if science, political categories and much else are output of the system shown, we cannot achieve the status of external observers.

We need, but do not have, a psychology of man that can rightly depict 'brain-body', 'consciousness', 'will', able to review the question of 'mind', 'soul', the nature of life, and therefore 'death'. Although our stance is that of the rational enlightenment that period in history has many sides to it that the secular humanist seems to have forgotten. In fact, it is a comprehensive dictionary of contradictions and dialectic. And it is counterpoint to the Romantic era and the conclusion to a massive transiting beginning in the Reformation. The question of 'soul' might seem mystical as pre-Kantian metaphysics but it is mandated by our study of history, if only to find its critique, or else the true physiology of man.

Man remains a mystery to himself. The real background will become modernity as a whole, and then world history itself. But then the basis of our objectivity is one and the same dynamical object in temporal motion. We cannot really find objectivity in a field in which we are agents of its realization. But perhaps we can come close enough for a first understanding. The point is that ideologies are also output of our system. The question of human psychology has an immense history and thousands of sutras, yet the modern brand is barely beyond its period of behaviorism and cannot resolve the issue of 'consciousness'. We might note that the current fashion for mindfulness exercises, and this invokes for contemporary the ancient distinction of consciousness and self-consciousness, compounding the mystery of two subjects formerly one. And that is the right prelude to the mystery of creativity, and its crucial place in historical understanding. The data of the eonic effect is an orphan of theory but finally must be classified as an evolutionary subject beset with the magpie of theism claiming 'intelligent design'. The issue of 'intelligent design' has spooked the secular humanist but the issue has lost it religious slant and stands as a challenge to a new science. The question of evolution is very controversial, but only because it has become a dogmatic thesis of Darwinism.

Our study assumes a critique of that now crumbling field dominated by the myths of natural selection. In many ways the physicist Fred Hoyle pronounced the verdict on the strange obsession with a statistical fallacy: he noted that natural selection couldn't even get one peptide right. The strange domination of statistical idiocy by a whole profession of academic biologists is one of the strangest outcomes in the history of science. Darwinism was

'god's gift' to amateurs who are the only ones remaining to deal with the subject. Our study of history will create a new and empirical perspective on evolution, but that in the context of history. The point will become clear as we go along. There is a 'last judgment' of man in history although the religious version of that idea has lost track of its meaning. Like a categorical imperative it has an almost mathematical self-deduction in a field of abstraction, could we but read its latent potential. But it is also the case that history is barely underway, and the record shows incomplete histories, as it were, prematurely subject to false judgments. We stand at the threshold of space and entry into a cosmic world, curious to contact alien life, if it exists. But we should wonder if such is in any way eager to contact us. Looking at world history, does the record gives us confidence in any reckoning of cosmic life by the standards of known civilizations? It is a question of some suspense and the evidence of history must speak for itself, if there is a judge of the balance of evidence.

THE MYTH OF RANDOM EVOLUTION

The eonic effect presents us with an ultra-complex phenomenon of nature that defies the laws of chance. We must consider the question of randomness in discussions of evolution. Darwinism has totally confused the issue here. The issue of chance in random evolution has usurped the real challenge. Natural selection was a useful cover story. But the reality is that evolution is so complex no theory is possible, as yet. This is a short guide to a new way to study world history, with a discussion of evolutionary theories and in the process an examination of the evidence for a *non-random pattern* in world history.

> The term 'non-random' is deliberately minimalist and might be described with more intuitive language. Crusoe observing Friday's footprint was definitely seeing the non-random by comparison with the uniform background of the beach. In many situations the non-random is something that catches our attention as unexpected or that stands out as causally rare or designed or even 'intended'.

There are many possibilities here and the term non-random in world history receives a careful discussion as both an epochal frequency and a global synchronous action. The non-random points to evidence, and defies

simple refutation or falsification. Interpretations are another matter. The eonic effect catches our attention as a non-random pattern ten thousand years in length and globally distributed. Causality, design, and intention are complex terms indeed and the question will arise, is 'design' the same term we find in critics of Darwinism who seem to critics of these critics to be introducing a Trojan Horse for divinity. But design is omnipresent in nature and innocent of theology as it asks for its place in scientific explanation. The term has been sabotaged by another, 'intelligent design', used as a Trojan horse for theological legerdemain. We can adopt a simple strategy here: put the term 'intelligent' in quotation marks. Design in nature often looks 'intelligent' but no theistic interpretation is going to work. The term 'intelligent' is so far a metaphor. We must be wary of creationist stealth terminology.

> The reign of Darwinism has created misinformation about biological entities that show design, e.g. hypercomplex biological machines. It has sent its own students into a losing battle trying to show how such entities could arise at random.

> From WHEE: In general, severe, almost certainly fatal, mathematical challenges have always stood in the way of selectionist assumptions. In a now classic text, *Evolution From Space*, Hoyle and Wickramasinghe give one version of this objection. With grim finality, natural selection can never be right:

> *Darwinian evolution is most unlikely to get even one polypeptide right, let alone the thousands on which living cells depend for their survival. This situation is well known to geneticists and yet nobody seems prepared to blow the whistle on the theory. Cf. F. Hoyle & N. Wickrmasinghe, Evolution From Space (London: Dent, 1981), p. 148.*

Endnotes

The real puzzle here is how biologists could make such a blunder at all and then create a totalitarian academic mind control system to enforce it. We must suspect the grip of Social Darwinist ideology inside a capitalist system.

> The idea of natural selection is attractive (to capitalists) because it voids ethical considerations in the name of science and seems to validate (economic) competition. The implication is spurious.

Species do not evolve through competition or survival of the fittest, a pernicious idea that has corrupted the social sphere. Another factor is the debate between creationists and secular humanist atheists. But the issue of chance in evolution has no connection to the dilemma of theism and atheism.

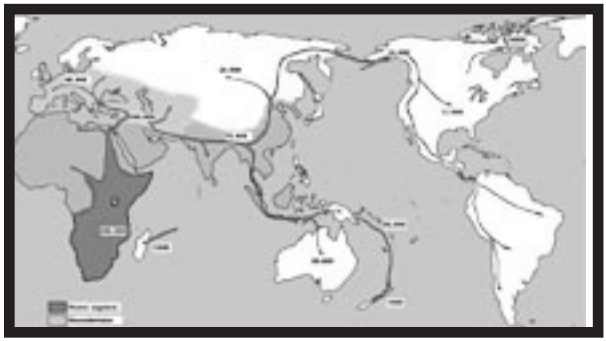
This situation has left the field to amateur outsiders. There is a lot to consider here, but the reader can move to the next chapter for the core of our discussion. Once we see that random evolution fails we confront a stunning complexity behind the face of evolution, along with the issue of design. Our basic strategy must be an empirical map of evolution in action. And a realization that while design arguments have been exploited for theological pleading that strategy has failed and we confront design head on in the spectacle of nature. The debate over chance and design has stalled the real enquiry needed.

Recent computer programs, as in 'artificial intelligence', show 'intelligence' but they aren't alive or conscious. That's a warning to be wary of design arguments, especially 'intelligent design' sophistries. These new fields are likely to resolve many problems of evolutionary theory in the future. We cannot banish the term 'intelligent' applied to nature in a colloquial metaphor that is not crypto-animism. By the same token reductionist 'scientism' with its assumptions about random evolution is another set of opposite confusions.

> Recent advances in artificial intelligence and 'learning' machines offer a provocative upgrade to our notions of explanation. We confront a new idea about the nature of evolution: it is a global field that learns as it goes along, and bootstraps organismic, then civilization designs. These designs in deep time reify in terms of organismic entities that then adapt to an environment. We must be wary of jumping to conclusions, however: such innovations are not directly useful for us, but help to expand our sense of 'explanation'.
>
> The evolution of civilization is still more elusive and complex and interacts with man himself in an interplay of 'system action' and free agency. Man in part creates civilization, but in the context of evolutionary induction. We must begin to distinguish the two: we call this the 'eonic evolution' of civilization. There is a classic book with the title, Man makes himself. But we begin to see that is only partially the case. Something induces man to realize an evolutionary blueprint, one so abstract that man must perform a creative realization of the abstraction in the background.

We might consider an interesting speculation: is 'evolution' learning as it goes along?

Thus we can allow the term 'intelligent' design in nature if the term 'intelligent' is put in quotation marks. Although the term 'design' is enough for our purposes and can be given a naturalistic focus, we can reserve the right to apply the term 'intelligent' to that without reference to theistic



The Human Diaspora (one version)

A short history of the world

Man emerges via evolution as homo sapiens in the wake of a progression of hominids with homo erectus as an early stage of a transition to 'homo sapiens'. This occurs in Africa in the period after ca. 200K BCE but is probably the result of some kind of rapid development, sometimes called the Great Explosion in the period from 150K BCE. No one knows...

The 'great diaspora' from Africa occus sometime after 70k BCE and soon man is a global constellation that soon reaches all continents. The so-called Paleolithic yields to the Neolithic ca. 10K in the Middle East but becomes very dramatic as ca. 8K BCE. The progression 'village, town, city' is the gestation for higher civilization which emerges in the last centuries before 3000 BCE in Sumer and Egypt. Each stage creates a diffusion field and that of Sumer and Egypt is soon a near global phenomenon and the realationship to the New World remains unresolved, yet diffusion is suspected. We cannot sort out the complexities without the eonic effect... The realms of Shang China, early Indic, Mesopotamian and the Egyptian field produce a series of diffusion starts in China, India, the Middle East and Europe.

The resulting 'epoch' of the diffusion field of Egypt/Sumer lasts until the first millennium BCE at which point we see the upsurge of a new stage of advanced civilizations in China, India, the Middle East, and Europe. We suspect elements of diffusion in the New World Mayan world. The occident shows the seminal worlds of Greece and Canaanite 'Israel/Judah' in parallel The birth of two world religions in Canaan and India is matched with the birth of the secular type culture in Ancient Greece. Th e sphere yields to the empire of Rome and its extensive empire mixmaster. The long era of decline persists for hundreds of years until the rise of the modern world after 1500/1800.

assumptions or disputes over church and state.

The idea of 'intelligent design' is not the bugaboo Darwinists make of it. But its exploitation by religious and/or creationist groups puts the term into a tug of war of religious and secular thinking. The answer is simple, put 'intelligent' in quotation marks, allow the concept into discussion but demand proof. The key issue here is that while 'intelligent' design appears in nature it cannot be use to explicate the Old Testament. One we see this, the use of the term becomes usable in non-theistic contexts. Secularists have their own dialectic here if we consider the simultaneous appearance of Hegel and Marx.

Times have changed: the rapid secularization (itself an eonic process from the early modern) of society makes the theological implications of intelligent design less believable. We can sense that certain processes might seem 'intelligent' as a metaphor without implying a sort of anthropomorphic animism. But the issue is less clear. We suspect 'nature' shows a planetary design aspect. But what is that? For reference, we note that the eonic sequence itself injects at the dawn of modernity a spectacular three way collision of Kant, Hegel, and Marx in the perspectives of historical process. Kant debriefs the design argument, Hegel remystifies history and planetary life with a post-monotheistic crypto-theistic notion of 'Geist' and Marx tries to reduce history to economic processes in the epochs of productive forces, feudalism, capitalism, communism, etc...An antinomial stalemate?

It is helpful to consider recent discoveries such as the spectacular biological nanomachines at work in living entities. These designed objects are surely naturalistic in origin, yet stunningly complex. Science is still allergic to 'design' thinking. However, the term 'design' is a perfectly good candidate for a new science, but we cannot specify 'mind' in nature without proof. It might well be so. As Hegel suspects. But 'cheap' theological hankerings have made the idea suspect. Let us add at once that many things in nature/evolution do seem intelligently designed. But we are unable to close the case and as the example of AI shows many things can mimic intelligence. Evolution would seem one of them. In part the confusion arises from the way physics advanced by rejecting Aristotelian teleology. But little noticed is the way, at the dawn of biology, teleological thinking made a comeback with the so-called teleomechanists. One might consider the atheist Schopenhauer's idea of the Will in nature: he was an atheist, yet found a new semantics for

a designer, and a question lurks here, what do the terms 'alive', 'conscious', and now 'will' actually mean? Perhaps the most elegant design argument was that of Hegel who thought a 'ghost' (Geist, spirit) of some sort haunted the planet Earth, but he was met with a hail of rotten tomatoes by proponents of materialism as critics of dreaded 'absolute' idealism such as the Marxists. In the background lies the third option of transcendental idealism of Kant. We must carefully study all three categories, with a sense that whatever its core nature fronts as universal materialism. In a age of quantum field theory even that remains in check. Our subject has an ancient ally, the archaic yogis of Samkhya whose universal materialism passed high and low (in some versions however dualistic): the spiritual is a brand of the material. This legacy is useful because we can bypass useless debates over material versus spiritual entities.

> The eonic effect moves in contentious terrain and shows a design argument that contradicts the Old Testament's very primitive design argument about a very villainous psychopathic and very unintelligent 'god' called Yahweh. Such a being is a poor candidate for the intelligent design of evolutionary entities. In general, design arguments are unavoidable because biological structures are complex machines that show design. There can be no theological conclusion from that. These are very old debates mostly rendered obsolete by the philosopher Kant.
>
> Scientists have been needlessly confused by design given religious implications. But those implications are false. However, we cannot reject out of hand the possibility of naturalistic theism, based on objective terms, philosophical or scientific. A classic example is Kant's idea of the 'demiurge', as a higher force in nature, next to what we might call 'devangelic beings', (term we just made up) the object of endless ancient myths, yet absent from creationist/scientific debates. A knuckle ball for atheists. Material 'gods'? We may banish these phantoms, but we may not substitute reductionist myths of our own. The point here is that atheism might lose sight of naturalistic potentials, unknown but material and therefore open to discovery. Such entities is not refuted by naturalistic arguments, but can exert action in history, mythically, to be sure. The Buddhists considered the 'god realm', inside nature as 'Samsara'. The simplest here is that we have no evidence of any such!
>
> Angelic archetypes are pseudoscientific but entrenched across cultures, cf. the Elohim, etc.., they are also dangerous because they are abused to invoke submission in man, and entangled with animal sacrifice rituals. Monotheism is really a way to abolish such superstitions, which persist in various New Age meme sets, e.g. the Gurdjieff's version that feeds on human energy and to which man should be enslsaved. Such entities

> could never guide evolution whose scale is truly stupendous: the only candidate here is some kind of planetary effect still unknown to us.

The idea of devangelic powers is a softball pitch for secular humanists but is a missing third alternate between theism and atheism, and asks if there are hidden entities in nature that are able to act in side nature. Kant's idea of a demiurge is one example. Schopenhauer's idea of the Will in nature is another. The Old and New Testaments, many may not realize, refer to different speculative divinities. The world of the Israelites is that of the eonic effect, while monotheistic religions like Christianity are under a different process whose generation is different.

> It is helpful to consider Kant's critique of metaphysics as we confront entities that are phantoms to thought, but whose existence we cannot disprove.

The issue of devangelic beings, approached with caution, is useful as a logical gedanken experiment or curve ball in the limbo of confused theistic and atheistic thinking both. It also touches on the issue of A-life, and even, off the wall, space travel. Kant's antinomies are a key to seeing the latent metaphysical madhouse of human philosophies.

The point is merely to evade the mostly futile debates of atheists and theists. The common notions of 'god' are a kind of semantic abuse, but the atheist is often in equal confusion. It is also a good excuse to research the history here, viz. angelology. Religionists have lost the sense of their own mythology: the angelic/devangelist is not a spiritual but semi-material entity in nature that mediates the boundary of nature. This nonsense is not our object of belief, but a warning that material entities might have still unknown forms. The philosopher Schopenhauer probably found the rough answer in considering beyond issues of life/alive, or conscious/inert a realm of the will in his sense: a noumenal barrier to the factor of the 'will' in nature. The concept of 'will' which is not necessarily 'free' will is the lost orphan of reductionist science. But it is omnipresent in all cultures, banished by 'psychology' in a claim for science. But its question marks lurks at the end of a 'scientific' rebuttal. The real issue here is that such entities cannot be the 'intelligent designers' of evolution, whose data sets are stupendous in size, e.g. the four dimensional aspect of civilizations over thousands of years. We must suspect computational aspects of cosmic bodies alone capable of embedding 'evolutions' of species. The term 'will' here is not the psychological 'will' but something like variants of an idea of 'smart laws'. We won't pursue these ideas here save to note that as with Kant a part of the

'answer' we seek may be beyond observation. The eonic effect comes off as very 'smart' indeed. This kind of thinking will derail science but we must examine a large number of philosophies and their aspects. We end with a virtual of metaphysical sidelines.

The atheist materialist just might find evidence in nature for such if they have a material aspect.. Next to that is the mysticism of planets and cosmic bodies as cradles of life. We know nothing of this, but the question lingers, how does life arise at the level of cosmic bodies? The antinomies discussed by Kant were discovered by the Greeks. One such is the question, if I touch the edge of space, can I reach beyond with the other hand? These ideas lead easily to the real history of conceptions of 'god', mostly worthless metaphysical nullities, but valid antinomies in the Kantian zoo. But the confusions of theology spring more from the demand for 'faith' where nonesuch should be entailed of the butterflies of thought. The Gaia thesis remains to challenge the quest for world histories as evolutionary sequences.

In the end 'design' tokens a teleological process. Teleology is forbidden in science but there must be machines in nature that operate with direction. Google 'biochemical machine' and you will find fantastic images of dozens of such physiological entities. The eonic effect challenges religious claims for theistic historicism and Darwinism both, which means you have never heard of it in a culture dominated by rival propagandas, religious and pseudo-scientific. The real science of evolution still hopes to find its theory and here the study of the eonic effect might help. The religious issue is the claim that 'god' enters world history as a revelation of theistic action in time. This is the myth of the Old Testament and the first problem is that the term 'god' remains undefined so we cannot say anything one way or the other. It is obvious to us now that the saga is mythopoeic. But the idea of god intervening in history betrays complete incoherence and to say so is not even atheistic.

We will show design in world history but challenge theistic historiography by showing a new and fascinating interpretation of the tale of the Old Testament with its superb but mythological epic parallel with the Homeric sagas and whose correct interpretation will turn out to be an aspect of the eonic effect. The history of Israel is a massively detailed 'non-random' pattern, but its correct interpretation will elude the theologians of Yahweh, a rather bloodthirsty 'one god' so named yet dis-named as IHVH. The world is better off without Yahweh, as the last chance divinity in the eclipse of paganism.

> The term 'god' refers to an X claiming omniscience, omnipresence, omnipotence. The eonic effect is entirely different and shows a mystery of potency within limits, clustered transformation, and non-action over

> intervals external to its focal range. It is a considerable mystery, but it cannot be theistic. The only known category is the physical question of fine-tuning: a cosmological action seems to switch on in relation to evolutionary sequences. It is intelligible as a form of 'creative energy'.

The question of evolution is equally contentious and remains mired in controversies over theory. But in the facile yet not inaccurate debate over 'fact' versus 'theory' the theory of evolution founders in a version of scientism while the 'factual' basis for 'evolution' thrives on the revolutionary discoveries of the fossil record. Although our account might almost be better off without using the term 'evolution', it is important to enter the discussion of its meaning because world history is the only case where we can glimpse the reality of the process referred to as a synonym of the word 'development' which never evokes the same irate contention. History and evolution overlap and it should be the case we can detect it in world history if we know where to look.

The eonic model gives us a 'glimpse' of evolution (action over a region over several centuries in a macro/micro process according to a form factor), but we must note at once that we have no organs of vision to see history over a range of centuries. Instead we write books of history and attempt to reconstruct what happened. The result must challenge standard thinking because evolution takes place over a region and must integrate a process of speciation with something in place that is far more than random mutations.

The question of 'seeing' is highly controversial itself and if we compare the situation with x-ray telescopes we can see the complexity of creating an 'optical' apparatus and that we have no such organ for history and must go to libraries and read books and thence in some fashion create an 'image' in our minds called 'what happened' at such and such a place in time. But the analogy shows at once a host of complexities.

This shows the problem with the 'eonic effect: to 'see' in quotation marks we must begin to assemble facts in memory of what happened by reading books and interpreting a set of facts. And that is a deeper reason for the problem with communicating the facts of the eonic effect. Factual knowledge is not a shared experience, or common knowledge and we cannot induce surprise here in an eerie discovery until the reader reads those books with a belated 'Aha'.

But the study demands at this point the attempt to create acceptable quick summaries of world history and zoom level subsets of that. This is a nearly hopeless venture, but something approximating seeing history can

provide some information about world history and a mysterious process that emerges from that. The result is controversial and the reader may debate, attempt to falsify, or challenge any interpretation of the data in question, the objections of Darwinists and the however given little credence here. But if interpretations are controversial the basic empirical foundation is far less so and constitutes a reliable base line.

The modern world is a mystery to historical analysis but a look at the eonic effect can clarify this immensely and then warn us as to the historical danger of our current time frame in history. But the day will come when the vision of history, if not an organ of seeing, will prompt us to take control of our history and evolution for the first time in technological entities that function over tens of millennia, far beyond current notions of 'hi-tech' bravura. We might consider that evolution has moved to the self-evolution of a given species, so far science fiction. The old saw, Man Makes Himself, assumes this is a *fait accompli,* but we need to consider that man is not yet able to 'design' his own history, in an ironic usage of the term, and that the evolution of man as the speciation of homo sapiens is incomplete.

Note how relatively easy it is to simply state what the eonic effect is, and simply amplifying the same one paragraph description. But the term points to an immense field of empirical data about history in thousands of aspects: we devise high-level descriptions but at the same time create a gateway to real complexity of the phenomenon.

We will attempt a simple model and persue that in an appendix. We can jump the gun and give a simple summary of that model to conclude here: the evolution of civilization, which we suspect is a concluding phase of the evolution of man, is visible looking backward as a pattern of transitions or evolutionary jump-starts operating in sequence and in parallel. The pattern only becomes visible near the end with the invention of writing in the first phase that is visible, Egypt and Sumer. The process begins with the Neolithic, we guess, in the Middle East (The Levant, with a period just before called the Natufian as man discovered seeds and harvests wild plants), and then erupts in what is called 'higher civilization in Sumer and Egypt in the lead up to 3000 BCE. The era of Dynastic Egypt goes on for centuries while the Sumerian world yields to the era of successive Mesopotamian successors. Each phase of the sequencing transition (we call it the 'eonic sequence'). Then in the period after 900 BCE a stupendous new period of multiple transitions emerges across Eurasia in Greece, Israel/Persia, India and China. These multiple areas of civilization perform essentially the first phase of a

Physics and 'Fine Tuning"

This is an appropriate point at which to consider the spectaculr recent claims for 'fine-tuning' in cosmology. This new field is controversial yet speaks immediately to our confusions over evolution. There is tantamount to teleological thinking, dare one say the word. The idea should be conjectured without claiming it is proven. We confront the eonic effect very late in the evolution of man and organisms, and our response is, where does it come from? We suspect that evolution has directionality and that the eonic evolution of civilization shows teleology in some exotic new form. But this must be paired with the free agency of men in history. There is no absolute contradiction: in our analog of the creation of a novel, the form factor is part of a given goal, and free agents can realize that. Note that teleology can apply to the larger process of realized/unrealized potentials, e.g. the history/evolution of the 'novel'. Consider: *A Fortunate Universe, Life in a Finely Tuned Cosmos*, Geraint Lewis, Luke Barnes: Cambridge, 2016

The Teleomechanists: As Timothy Lenoir notes in *The Strategy of Life*, "Teleological thinking has been steadfastly resisted by modern biology. And yet, in nearly every area of research biologists are hard pressed to find language that does not impute purposiveness to living forms. The life of the individual organism—if not life itself, seems to make use of a variety of stratagems in achieving its purposes. But in an age when physical models dominate our imagination and when physics itself has become accustomed to uncertainty relations and complementarity, biologists have learned to live with a kind of schizophrenic language, employing terms like'selfish genes' and 'survival machines' to describe the behavior of organisms as if they were somehow purposive yet all the while intending that they are highly complicated mechanisms. The present study treats a period in the history of the life sciences when the imputation of purposiveness to biological organization was not regarded as an embarrassment but rather an accepted fact, and when the principal goal was to reap the benefits of mechanistic explanations by finding a means of incorporating them within the guidelines of a teleological framework. Whereas the history of German biology in the early nineteenth century is usually dismissed as an unfortunate era dominated by arid speculation, the present study aims to reverse that judgment by showing that a consistent, workable program of research was elaborated by a well-connected group of German biologists and that it was based squarely on the unification of teleological and mechanistic models of explanation."

global civilization, but in still distinct multiple varieties. In fact, that staging of multiple new transition spheres is an important seeding of variety and each area produces a new tradition and diffusion field greatly expanding the field of development. We should note that the Neolithic which precedes this phase seeds agriculture globally, with the case of the New World an open question (was there pre-Columbian contact of the Old and New Worlds? A chronic controversy, but we might note in passing that the Mayan start is in concert with the Axial Age, so we can't easily resolve the controversy there.

We notice a Frontier or Acorn effect in the successive cycles: the clearest case is the Israelite emergence in the field of Canaan which is the beneficiary of the Sumerian and Egyptian diffusion fields and then becomes a successive candidate in the next epoch of transitions: the sequence never repeats itself and we notice that Sumer and Egypt do not have Axial Age continuations. The mystery of proximate antiquity lies in its relation to the Axial Age and result is almost like a multiverse of parallel worlds. The emergence of monotheism in the Israelite world is blended with the Zoroastrian brand during the seemingly fortuitous Exile, as the 'disappearing' kingdoms of Israel/Judah produce a first version of a new invention: the globally expanding 'religion' as a diffusion instrument, and in context a challenge to paganism/polytheism.

The world of Greece creates its own field with an almost miraculous-seeming transition that produces a proto-secular world with the emergence of science, philosophy, multiple republics, and a first democracy, Hippocratic medicine, Homeric epic, poetic literatures, Greek tragedy, and prose history. The overall effect is one of stunning creativity. We should note the way we have used the dates 600/400 for our transition. In fact, we always consider the rough date 600 as the end of the transition and the two centuries after that a kind of initial flowering: the effect is obvious in the case of Greece.

We must consider the occident and the way that after the era of transition there is a prolonged down trend as the creative era is over and the system starts to decline, devolve into empire, and a strange neo-barbarism. We also note that the Israelite stream blends with the Greek and the result is the emergence of the Christian diffusion field, a potent cultural integrator in concert with the new Roman field.

The decline of the occident is predictable in terms of our model, but nonetheless an almost tragic stall in pace of development. The occident falls to pieces and never recovers until the modern transition.

Uncanny but almost certainly not chance, the overall system begins a

new take off after 1500 and most remarkable after the pattern of the Frontier Effect. The terms 'rise of the west', 'European civilization', are misnomers and we see that the new phase acorns at the exact boundary of the old Roman Empire in a curling circle: Germany, the Netherlands, England, France, and Spain, with a kind of trigger effect in Northern Italy.

Between 1500 and 1800 this set of transition zones which resembles that of the Greek produces a stupendous set of innovations beginning with the Reformation, the emergence of science (as if from antiquity) philosophy, multiple literatures, a rebirth of the tragic genre, the whole phase of the Enlightenment and the counterpoint Romantic movement, a new form of capitalism, the Industrial Revolution, multiple political revolutions and the gestation and realization, re-amped, of 'democracy' and a chase plane for capitalism, a dialect of democracy, socialism, and a novelty (but the Greeks thought of its first, the socialist variant democracy/capitalism. Later we will see that the idea of the transition generates an additional concept: the divide, the end point of the transition, here ca. 1800. Our emerging model shows the way the innovations reach a climax just before the divide in the stupendous clustering of changes we see up to and beyond 1800. But we notice already that the pace of innovation changes its character and begins to wane: that is, deep cultural innovations. The transition gives birth to a new technological field and a new economic spectrum and these begin to generate their own sub-field of innovations, inventions, while the economic realm spawns the dynamic 'dialectic' of capitalism and its counterpoints claiming a final future. The rebirth of the tragic genre is again brief and evanescent while the piece de resistance of the modern transition is the birth of so-called 'classical music' which becomes visible in the seventeenth century, proceeds (from Italy) to the range of transition zones and produces a tremendous climax near the divide and then begins to taper off, over by the early twentieth. It is unnerving and uncanny to see this correlation of 'classical' (? really modern) music and the transition matrix.

Just as with the Greek instance, we see already, or so we suspect, that the two centuries after the divide or the end of the transition shows its momentum proceeding to prolong itself in the cascade of social transformation. But we begin to see once again that waning of the creative energy and the fatal symptom: democracy in danger.

We have a mixed set of genres with that of Big History giving a useful container for the many varieties, and almost the same as 'Universal History' as perhaps 'Universal Evolution'. Big History as 'history since the Big Bang',

is a useful parallel idea to our idea of 'history emerging from evolution' and the idea of history connected to the 'evolution of freedom'.

Appendix: In Search of the Big Bang

From WHEE, chapter 4

4.2.1 In Search of the Big Bang

One of the great achievements of modern cosmology is the discovery of the Big Bang as a theoretical consequence of General Relativity and now as an empirically detectable process of expansion from a starting point approximately 13.7 billion years ago. Emerging as a consequence of Einstein's relativity equations in the work of such figures as Lemaitre and Hubble who discovered an expanding universe, Big Bang cosmology found its instant dialectical opposite in the steady state theory of Hoyle, then finding its empirical confirmation in the discovery in 1965 of the primordial background radiation left over from the t-zero, or rather the t>0 moment. The remarkable reconstruction of this emergentist sequence beginning with a primordial atom at trillions of degrees has led to the crystallization of a new 'creation myth', one with a mysterious, and quite Kantian crypto-metaphysical, raggedness precisely at its curtain rise.i

In the first second from Planck time to the separation of the fundamental forces to the drama of cosmic inflation and the appearance of quarks and antiquarks the spectacular first sequence proceeds in the first minutes to the appearance of hydrogen and helium nuclei. The first three hundred thousand years show the beginning appearance of atoms and the new universe is on its way toward the formation of galactic then stellar formations. By the period of four billion years ago the beginnings of life will initiate the planetary scale of Earth evolution. The ambiguous first instant of the primordial atom is not like the sudden explosion of a bomb, but is a more complex process involving the unfolding of the spatial matrix itself. The early form of the Big Bang cosmology was soon extended with the theory of inflation which demonstrated the rapid expansion of the universe, faster than the speed of light in a fantastic scenario of sudden origins completed within fractions of a second.

With the spectacular drama of creation complete, the world of galaxies and stellar evolution begins and our stage is soon set with the appearance of

the sun, earth and planets 4.56 billions of years ago, followed by the emergence of life less than a billion years later. By 1.5 billion years ago, the first cells are emerging, and then we have the dramatic beginnings of life as we know it now with the first multicellular organisms, and the rapid proliferation of basic body types in the Cambrian era over half a billion years before the rise of man. As we ponder the question of evolution, any dogmatism as to its dynamics must confront the mystery of the origin of life, to say nothing of the Cambrian explosion. In any case the origin of life via the random assembly of the first DNA molecule is a proposition difficult to accept, and this difficulty will stalk us every step of the way until we reach our story of the rise of civilization.

10-43 seconds: the universe is smaller than the Planck length.
10-33 to 10-33: onset of cosmic inflation
10-10: separation of fundamental forces, quarks, anti-quarks
3 minutes: nuclei of hydrogen and helium
300,000 years: atoms form, and galaxy, then stellar, formation begins
5.6 billion years ago: Our sun appears from debris of a supernova explosion
3.9 to 1.8 billion years ago: emergence of life as bacteria
550 million years ago: The Cambrian era
55-60 million years ago: first primates
3-5 million years ago: Australopithecus, emergence of hominids
50, 000 years ago: homo sapiens

Despite the cogency of the Big Bang cosmology, there is something strange about this creation story, as a metaphysical murkiness lingers at the fuzzy edges of its account. The concept of a beginning in time betrays its lack of definition, as does its opposite. Indeed it is the interplay with its antithesis, the steady state, and its resemblance to a classic antinomy of Kant, 'there is no beginning in time', 'there is a beginning in time', that should warn us that everything about the theory is quite acceptable, $t>0$, and nothing better than head-scratching before that. We seem to be philosophers before we are cosmologists, and in the footsteps of Alice in wonderland. We are forced to the implicit question, unanswered, that lurks behind the Kantian challenge to our sense of space-time as a representation, and no easy resolution of that mystery. Although we cannot use Kant to solve the problems of physics, we do know the symptoms of antinomial empiricism and are left to wonder at the characteristic dualism or dialectic that is clearly in some way a property of our instruments of thought.

Indeed, sure enough, in a recent new perspective, Endless Universe, Beyond The Big Bang, we have already the swinging of the pendulum in an attempt to proceed beyond the Big Bang by incorporating it in a scheme of larger, repeating, perhaps endless, cycles of cosmic evolution. The discovery of Dark Matter and Dark energy, and the attempted extension of the Standard Paradigm into the realm of string theory with its hyperdimensional implications has begun to suggest a new understanding beyond Big Bang cosmology of cyclical models of cosmic evolution. Each cycle begins with a Big Bang, but this is an event in time with a before and after, the exact same a priori form that we see in the eonic effect. We can only smile at this direct evidence of a Kantian antinomy in action.

WORLD HISTORY DECODED: THE EONIC EFFECT

The eonic effect poses an elusive riddle, and betrays its existence in a mysterious design: the stream of history shows an embedded sequence, climbing Mt. Improbable. We will call this the 'stream and sequence' property. History goes down, but a hidden driver, in a transition, pushes upward. The stream of Greek history from its emergence in Caucasian wilds to modern times shows a step in such an embedded sequence in the period of the Greek Archaic period. The modern transition is a spectacular instance of an eonic 'transition' with a divide point ca. 1800: it is clustered with a massive constellation of innovations. It has nothing to do with Europe and creates a global oikoumene at record speed by the end of the nineteenth century. The idea of 'European civilization', although not invalid, is misleading and has even done harm. The eonic is a global process and leapfrogs between civilizations.

> We might have thought 'civilizations' evolve, but they do not: instead a series of subsets of civilizations does the 'evolving' in our sense. These don't occur at the temporal beginning of a 'civilization'. These are called 'transitions' and conclude with a 'divide'. And the larger sequence

follows a frontier effect: it always restarts in a new area.

In addition, this phenomenon (sometimes) shows synchronous action in different places at the same time, sometimes referred to as the Axial Age, and this suggests global coordination. Evolution can multitask. We called this overall pattern the eonic effect, a mysterious drumbeat in world history. It is invisible to the naked eye, so to speak, but gives itself away with its massive clustering of sudden innovations in given regions over short intervals. That is non-random and can't be ascribed to chance. Civilization emerges in association with a larger macro effect. The history of 'Israel/Judah' is perhaps the most spectacular transition: between ca. 900 BCE and 600 BCE a new world religion emerges complete with an associated literature. The stream is different: from the centuries in the wake of Dynastic Egypt and Sumer, soon a slew of Mesopotamian successors, a mysterious Canaanite entity generates a religious history of Prophets and biblical documents, then taken into Exile where it is blended with another monotheism, Zoroastrianism. Note that Moses and Abraham are part of the stream, not the transition. This strange and remarkable enough this transition is synchronous in uncanny timing with the other transitions of the Axial Age (a term we need to replace).

The eonic effect is at first utterly simple to an airplane view:

earlier transitions?
the era of Sumer and Egypt...ca. 3000
the classical era: the Axial parallels...ca. 600 BCE
the modern era...ca. 1800 AD
No Future Transitions? End of Eonic Sequence?

At each of these periods world history seems to go into high gear and rapidly produces innovations that change the whole game: in a matter of about three centuries (our unit is made large to be roughly inclusive). Thus, the centuries before 3000, 600 BCE and 1800 are lead up intervals we call 'transition's that are to the high end about 300 years but often accelerating near the endpoint, which we call the 'divide': 3000, 600, 1800. We are lucky: the rise of the modern is a classic case of a transition and illustrates the process at close hand. The overall pattern we see is obviously incomplete and a barely adequate three term sequence, but with suspected predecessors in the Neolithic. Our sequence shows parallel action: in the first, Sumer and Egypt, in the second the classic Axial Age parallels: Greece (Rome), Israel/

The eonic effect: the airplane view: zooming in

Although a three term sequence is barely enough, the additional interior evidence, (e.g. the transitions) shows a clear non-random pattern, but also its significance...It is suddenly clear what this is doing...

?Neolithic: Middle East, ca. 8000 BCE (two eras?)

Sumer, Egypt, short interval prior to 3000 BCE

Greece/Rome, Israel/Persia, India, China, interval prior to 600 BCE

The Rise of the modern, interval from 1500 to 1800 AD

Rome is really a spinoff of Greece. Persia and Israel connect two monotheisms during the Exile. The synchrony of Archaic Greece and Israel, 900 to 600 is striking, and two religions, one theist, one atheist emerge in parallel, Buddhism, monotheism, after 600 BCE. There are thousands of details like this and the study, across multiple times and cultures is arduous.

We are inside this pattern near/after the start of its third era, the modern. The 'eonic effect' is thus a fragmentary three term sequence, which we soon suspect starts in the Neolithic, but which suddenly stands out with the invention of writing in Sumer and Egypt. We are at the bare minimum stage to observe this: two full periods, and the start of a third. In each case we see about three centuries in a kind of transition clustering sudden advances followed by a more stable state. The effect is sequential in three periods or epochs and parallel in the first and second, as we see in the second period with as truly spectacular set of synchronous transitions. The period on a sliding scale is 2400 years. People have looked for cyclical patterns in history but never succeeded. The eonic effect shows the simple answer, in a fragment. This pattern shows determination only in the starting transitions: the reader must study the model to see the difference between system action and free agency. There is probably a set of still earlier eras in the proto-Neolithic late paleolithic...

Persia, India, China, in the period 900 to 600 BCE at the outside, and the modern transition ca. 1500 to 1800. The European focus in the third stage is a localized global action and has nothing to do with Europe or European civilization. The unique focal point of the modern transition is the successor to the multiple parallel transition of the second, 'Axial', era. But to a close look overall we see that while the earlier cases create distinct cultural zones, the modern case collapse to a unique focal point, in what we will call a frontier effect. If we include the Neolithic (we will later search of additional transitions) we see that the eonic sequence in ten thousand years creates a global oikoumene as the first transcultural unity in world history.

> The modern transition follows a 'frontier effect' and touches only a subset of the European field. The eonic sequence moves to a new area adjacent to the prior zone. Thus, the modern transition jumps from the core Eurasian field to the frontier of the Old Roman Empire.

The Israelites, whose appearance follows a frontier effect with respect to Egypt and Mesopotamia, noted an isolated aspect of this effect in their history and thought it 'revelation', 'god' acting in history. They were both effectors of and participants in the mysterious emergence of a new kind of religion, and one antagonistic to the paganisms of a more primitive past. The centuries up to the Exile are a classic instance of what we call a transition. The Israelite sequence in the greater stream is a true wonder of the eonic sequence. Why would 'eonic' evolution spawn such religions: generate metaphysical enquiry, gestating oikoumene integrators, creating transcultural literatures, challenge to polytheism, ... The reader has enough to consider this on his own. But we should note the need to zoom in and study the deeper layers. For example, the context of Israelitism was in the context of Zoroastrianism. We should wonder if the deeper aspect was to integrate Semitic and Indo-European cultural aspects in a first world religion. That never happened and we wonder if the result in the endless confusions of antisemitism wasn't a misfire as free action or system action. That is good point to consider in general: the outcome of the eonic process is free agency applied to a macro effect, here, our guess would be: generate a theistic oikoumene religion. The case of Buddhism is less contentious and free of theistic metaphysics and appears as the exploration of the evolved potential of human consciousness. Like the Israelite instance it spawns a vast literature, a set of meditative practices and its own oikoumene and diffusion field.

We have barely introduced our model yet we have shoved the reader

into the deep waters of a vast set of data fields, here the Judaic leading to the Christian, thence Islamic, but is also an attempt to bring in the Zoroastrian component. The complex history of 'Buddhism' includes a parallel instance of the way Israelitism spawns Christianity in the synchronous appearance of Mahayana at the start of the new millennium. This is hardly chance. We are left to wonder if the emergence of two religions in the occident was not a structural confusion. We should move on but note the way we repeatedly invoke seemingly infinite detail. Note that Israelitism is very primitive but shows system action, while Christianity, and Islam less rough are all free action.

> The Axial Age produces two world religions, one theistic and one atheistic. It is hard to know what original vision of 'god' preceded the crystallization of Israelitism into a 'one god' ideology. The reluctance to name 'god' in the glyph IHVH shows us that a deeper vision now lost was present at the start.

The case of Israelitism is truly remarkable, but their later concept of god was basically the pagan pantheon with one 'god'. This was at best a stage on the way a greater abstraction, again incompletely suggested in the classic Islamic formal declaration, There is no god but god. The Israelites saw themselves as innovators of religion and they were right, and a near floodtide of prophets appeared to the point that by the time of the Exile they could look backward and see the compression of time in a creative burst that produced finally a new type of religion that produced a Book that became the integrator in multiple oikoumenes. Let us note that the eonic sequence only operates with a brief phase of 'system action' followed by 'free agency". The 'god' concepts that emerged were primitive in their own way and we can't be sure what the induction phase began with. Almost everything we have was rewritten much later from the seventh century to the period after the Exile. In addition, it is a stunning concordance the Israelites during the Exile had contact with Zoroastrian monotheism.

This period from ca. 900 to 600 BCE is a transition in the larger stream that is mostly mythical. The reader is taken as secular humanist in the modern epoch and the account here moves past the issue of theistic history or divine revelation. Study the Israelite period from 900 BCE to 600, the strange train of events is almost incomprehensibly mysterious. Small wonder ancient Canaanites still barely past child sacrifice thought the motions of whole peoples across continents was theistic action. With grim finality the god hypothesis fails: no divinity would create the chaotic confusion of Judeo-

Christianity as they jackknifed against each other. The case of Mahayana was more successful on its own terms, and created a de facto new religion inside the original start up. Note the uncanny synchrony of Christianity and Mahayana. But we must let modern thinking distort the historical record that produced a wildly popular ecumenical literature in the Old Testament as a Book destined to be transcultural resource.

More remarkable still is the parallel 'transition' in Archaic Greece. The Greeks never connected their massive and sudden creative combination as a unified process. But it was perhaps the most creative in world history as it laid the groundwork for almost everything that comes later. To get some idea we note that Luther as early as the sixteenth century proclaimed a new era. But the *philosophes* almost did likewise: The same partial perception of epochal transition straddles theistic and post-theistic perceptions. But small wonder the Israelites saw the action of a 'god', soon 'the' god. Their experience even to modern thought defies the laws of chance and they began to put two and two together. The Israelites noted the eonic effect because they saw a flood of novelties as connected, e.g. the Prophetic movement. But the theistic concept fails finally.

> The stream of Greek history goes from ca. 2000 BCE to modern times. But its embedded 'transition', ca. 900 BCE to ca. 600 (400) produces a stupendous transformation and clustered innovation. This is part of a larger 'eonic sequence'. The stream aspect of the Israelite history comprises the early books of the Bible and figures such as Moses whose historical aspect starts to become fuzzy as myth. Ironically the less read parts of the Bible in the period after 900 BCE hide a remarkable history. Much of the Bible is written much later based on earlier texts. And in a stroke of mystery the Exile takes the Israelites bodily to a parallel laboratory of monotheism in Persian Zoroastrianism, where the strains of the 'one god' mix in the gestation of the coming result. The plight of the hapless Israelites is itself significant as new religion will be able to stand in as a revolutionary force for equality and the placelessness theme provokes the idea of universality.

The stream of Israelite history in the Old Testament is a universal history as myth, but the period after 900 BCE to 600 BCE undergoes a mysterious transformation that produces a new religious tradition. Note that Moses is a mythical or semi-historical figure in the earlier stream, not the transition. The parallel synchrony of 'Israel' and the Greek transition are almost uncanny. In India we see a parallel religious transformation in the same time frame. In some ways this is a kind of 'reformation' and

at the end we see the emergence of another world religion, Buddhism. In exact concert a theistic and atheistic religion emerges in concert. In China, the emergence of Confucianism and the mysterious Taoism pass at once beyond religion to a higher level of insight, one that will appear more crudely in the Trinitarian theology. The Greek transition especially shows social transformation via its city-states and we must suspect similar but not clearly evident data in India and China. But the Greek case seems especially complex in its cornucopia of innovations inside a kind of class struggle that produces a spread of republics and finally the classic Athenian democracy.

Theistic interpretations won't work, but we consider the fact that our result looks like 'intelligent' design. But that won't work either. Nonetheless we face a crisis of analysis: a 'mechanism' unlike any we know. Another problem is that the Israelite experience is one in a parallel band of synchronous histories, with mutually inconsistent results: Israelitism produces a theistic religion, but in exact concert India produces an atheist religion, Buddhism. It would seem then that our 'mysterious macro' process stands beyond the duality of theism and atheism, a warning that it operates at a mysterious level of abstraction, a point obvious from the brilliant but elusive Taoism. But it suddenly makes perfect sense: a global integration must not smear over the quantity of variety in a homogenized uniformity. A seeming teleological process challenges its own aim with a studied exception as parallel inductions. However, the suspense of this will be resolved by the modern transition which creates another kind of uniformity amidst diversity.

Something is acting at a higher level in a way that appears as parallelism. The synchronous emergence in parallel of the Archaic to Classical period and the saga of Israel/Judah up to the period of the Exile and its interaction with Persia, and then beyond to ca. 400 BCE is exceedingly strange, almost eerie and then we see that a similar set of transitions occur also in India and China. The Greek Archaic which precedes the classic period shows a complex social transformation that flowers in the subsequent Classical period: the period is extraordinarily clustered with innovations. And then as the centuries go by the whole system goes into decline and we find the play of empires ending in the Roman period and its subsequent decline. Civilization never reaches the peak at its start until modern times.

> We should note that the Axial synchronous band shows two generated 'religions', Israelitism (a first monotheism) and Buddhism, one theistic and one 'atheistic', an important clue that eonic emergentism springs from a deeper source than such an 'outer' duality. The idea of the one god appears in earlier period, e.g. with figures like Solomon, but the

transition period creates a religion form it.

Let us summarize in advance the overall discovery and then start over in a later chapter with a model.

> The rise of civilization shows a hidden 'driver' visible in the sudden takeoffs and accelerated changes visible first in Sumer and Egypt, then classical antiquity. Suddenly we suspect the enigma of modernity is a part of this process. We begin to also suspect that this process was active in the Neolithic and that the transition from the Paleolithic is also part of the same sequence of driven epochs. It is thus easy to state what the 'eonic effect' is, but that points to an immense field of data as we zoom in. Finally we offer a suggestion that the evolutionary emergence of homo sapiens is via a similar dynamic. On one level this is a garden variety frequency system with an apparent period of 2400 hundred years.

The idea of evolution is the right one here, but the reader may be suffering cognitive dissonance in a Darwinian hangover. Our usage is right, but qualified to the 'eonic evolution of civilization'. Almost invisible, it seems, we detect finally the hidden drivers in the transitions. We are inside the process and can't see anything until near the end looking backward we see that in ten thousand years global civilization has come into existence with a hidden evolutionary driver.

Endnotes:

The reader can move to the two appendices, to begin a larger study, and consider here the obvious implications of the airplane view: we can see things at a glance, but their detail eludes us. This is misleading: we seem to have finished before we started: we have declared the existence of something called the eonic effect, described it in a paragraph, and are ready for grand conclusions. But there is a catch: we enter a kind of alternate universe of data that stretches on and on into more and more detail, as a mysterious data set comes to life. We cited two cases, 'Israel' and Archaic to Classical Greece. The tricky cases of India and China remain, but our emerging model starts to show their own deep significance. With China we see the Axial Age effect, but find it hard to even see a transition. Yet the signature is there as the two cultural signposts show us Confucianism and Taoism, a beautiful and mysterious descant beside the Indic and Occidental.

We can see at a glance (but only if we read a few books on world history) that world civilization progresses through a series of well-placed

Mscro and Micro

The idea of 'evolution' evokes a resemblance to category theory in mathematics: the category of evolution stands beyond its many exemplars and has a series of parallel properties, e.g. macro and micro evolution. Macro and micro are very different in organismic and civilizational evolution. But we will later see a possible connection. In any case both are members of the category of 'evolution'. In the eonic model the macro is the transition, the micro the agent who realizes the form factors. In organismic evolution, the macro is speciation, in the micro interaction with the environment sometimes natural selection. Note that natural selection is not speciation, one micro, the other macro. The eonic effect is taken as macroevolution and works via individuals as microevolution. But the macro process is not a single transformation applied to parallel entities, but multitasking multiple transformations in a single phase adapted to separated areas. The implies the macro process must scan the regions in question to assess their histories. The macro process does smart things in different contexts. The slight difference in the two examples of the evolution category might seem to be a problem but we suspect that there is deep connection.

We have at a high level looking at the pieces of puzzle on the surface of the planet. We must begin to study each piece in its history. Since we reference 'Israel' or 'Israel/Judah', we can cite an invaluable analysis of history, *The Bible Unearthed*, by Finkelstein and Silberman. The Old Testament history of the two kingdoms is a core example of the 'eonic effect' and its data and dates, timing, fits into the eonic model as now secular evidence almost perfectly. Next to its twin and companion the history of Archaic and early 'classical' Greece. But the reader needs to consider a method of study. The human mind can absorb far more information than one might think. But how to do that? *The Bible Unearthed: Archaeology's New Vision of Ancient Israel and the Origins of its Sacred Texts*, Israel Finkelstein, Neil Silberman, The Free Press, 2001. Cf. Johnathan Hall, *A History of the Archaic Greek World, ca. 1200-479 BC*E, John Willey & Sons, 2014

transitions, of which the most recent is the period of the 'early modern' from the Reformation roughly to the end of the eighteenth century, We are thus, and we sensed this all along, near the beginning of a new era in world history that we can 'modernity'. As we zoom in the subject begins to reach a new level of detail and that collates data from hundreds, then thousands of books. But with care we can consider the top-level 'bird's eye view'. Nevertheless, used with care, the model in the last chapter can answer a long list of questions that have always seemed enigmatic:

After tens of millennia of stasis for stone age man, 'civilization' suddenly emerges in the middle east and develops very rapidly in on the order of ten thousand years, achieving globalization in our own time.

The period of the Neolithic expands globally and then in Sumer and Egypt move to a higher level of civilization of states, cities, and the invention of writing which shows us for the first time, history at the level of centuries and then decades, etc..

The next phase begins ca. 2400 years later and shows a striking parallelism with transitions ca. 900 BCE onward to 600/400 BCE in Greece (Rome), the middle east ('Israel/Judah, Persia), India, and China. The synchrony, especially with Archaic Greece and Canaanite Israel/Judah is so exact as to be uncanny. In addition the correlation with India is striking we see two world religions, one theistic, one atheistic, emerge in exact concert. We see the sudden generation in Archaic to Classical Greece of virtually all the categories of later world cultures. Then by 400 BCE the effect wanes and the Occident never reaches the level of its starting point. The situation devolves to the state of empire, barbarism, and finally collapse and decline into a medieval period. No recovery occurs until the rise of the modern in the sixteenth century.

The early modern shows a strong similarity to the case of early Greece and we suddenly realize that the period from ca. 1500 to 1800 stages another of our transitions and demonstrates hundreds to thousands of innovations in a flood tide. Again we see a religious reformation, then science jump started once again as the Greek starting point fades away. From the Reformation to the Enlightenment we see the transition from religion to a new secular era. Note the seeming inconsistency of the eonic sequence as it generates a religion and then its passing away.

Overall, almost all the mysteries of the evolution of civilization find a simple resolution in the phenomenon we call the 'eonic effect'. Although it is dangerous to mix models, what we have described, at a high level, is a

striking case of 'punctuated equilibrium': suddenly 'punctuations' followed by a steady state, appear in the right time and place. But the punctuations show a fixed frequency pattern, operate globally, and are not 'genetic' evolutionary operations. We should beware of the term, which is a useful metaphor, and not a really defined category. The point is clear that civilization develops in a series of jumps, or bursts, in a larger scheme of continuous histories.

> The most likely explanation here is to consider that evolution is a cosmological process connected to the 'fine tuning' emerging from the Big Bang era. This is physics hiding teleology under the rug, apparently. But such a conclusion is not really part of any claim about an explanation of what we see. It is merely helpful as a temporary stay against bewilderment.

We merely cite the issue of fine-tuning as a possible resource for explanation. Physicists are often critical of the idea, even as they stumble into a key aspect of their own subject. We must suspect the emergence of life is part of a teleological process physics discovers and then disowns. We should be wary of teleology and think of directionality relative to our greater present. We have no science of teleology, but it 'seems' obvious to inspection that we would more wrong to leave it out. We will include resources on the issue of fine-tuning and leave it at that.

To conclude, world history shows a mysterious process of driven 'evolution' in a pattern of 'transitions proceeding sequentially and in parallel. The directed line seems teleological, but the logic of global integration spawns parallel tracks which integrate a larger totality. That in fact is entirely logical: splitting direction integrates over a planetary whole. These transitions express a 'macro' evolution and seem placed to generate implosion as globalized cultural integration. Each transition creates a diffusion field a new civilization. Each transition is unique, moves to new spot adjacent to a previous zone or frontier and shows a divide point as the system action passes into free action. It is like a novel: the transition produces a template like a 'genre' and the divide begins the free agents' realization of a particular instance, e.g. a novel. The hidden template or form factor is the missing ingredient in all evolutionary theories. Although a three-term sequence (suspected of being much longer including the Neolithic) is a bare minimum, the interior evidence is so massive and on cue that we feel confident of our model. The rise of the modern is thus an extraordinary instance and perhaps the last transition given the way it has produced a first global oikoumene, and shown man a path to the creation of civilizations. The end of the eonic

sequence puts the whole affair into suspense as the element of free agency inherits the whole process.

The result here is still a blur. The reader is ready to move on to the next stage, and its systematic introduction to the larger model. We conclude here with another derivation of the eonic effect.

From here the reader can proceed to the next chapter which is an attempt to summarize the 'eonic model' followed in the next chapter by the Conclusion: the first Appendix is really the next chapter after this one, including the penultimate 'Eonic Evolution of Civilization' which is a short version of Appendix 1, which proceeds to take the results into a nearly infinite domains of data but in an organized way. The reader might start with a quick skim of Appendix 1 and 2 and then proceed to the Conclusion.

This is a strange book: it really starts with the Appendix. But we have so far is a set of pieces of a puzzle. With our model, and a bibliography of bibliographies we can find the detail.

Another derivation of the eonic effect

We knew the eonic all along, more or less, but the sudden addition of two new pieces: early Sumer, and Dynastic Egypt, suddenly extends our gestalt into a form of pattern recognition. But our perceptions were distorted by the oddity of the Middle Ages which made little sense in itself. Now we grasp its significance at once in the larger eonic sequence.

History and evolution are taken as random processes. The eonic effect falsifies this for history, at least, and constitutes a non-random pattern, a clue to a hidden dynamic of a new type: by a principle of sufficient reason, a step backward from causality, which means, what explains it? This dynamism shows directionality which raises the taboo issue of teleology, our troubles mount with conventional historiography. The overall result is a riddle inside a riddle but we can see from the overall result what it is doing: we are seeing the evolution of civilizations. The term 'evolution' is controversial, save in ordinary speech where it means 'some kind of development'. We can open with that simple usage, but the question will become more complex as we proceed. Darwinists are closing in, we'd best batten down the hatches. Fred Hoyle finished the question long ago, when he pointed to the statistical implausibility of random mutation producing the complex structures we find in nature. Natural selection can never be right.

The eonic effect deserves to be widely known, but its existence is an untold story in field of multiple propagandas, and the failure to study history, and

the recent (on scale of millennia) discovery of 'models' or systems analysis. Such terms are almost too fancy for what is a speedreader's perception after a balanced study of world history. The result requires an immense bibliography of texts, in multiple times and places. Students of history rarely study by this principle.

We are usually stuck somewhere between Darwinism and the Old Testament. The arrival of aliens from outer space would be most remarkable, front page news. But the detection of a non-random pattern in world history, despite its seeming unimportance, is a smoking gun, and in reality a far more exciting puzzle because it shows the key to understanding the emergence and evolution of civilization, and a solution to the nature of freedom in the field of determinate nature. Human destiny as a species is bound up in this effect and yet we are as yet blind to its action.

This material first saw light in *World History and the Eonic Effect* and the discussion here is a commentary and short depiction of the model in that seminal work. But the text here contains original material and discussion. We present the subject on two levels: a bare minimum amounting to special of periodization, and then a more interpretative approach that is less certain but nonetheless empirically sound. Among other things, we will explore the issue of theory and ideology. As noted the empirical basis is hard to question, while interpretations can be speculative extravagance without changing those facts.

The reason for this ambiguity lies in the relation of observed and unobserved aspects of our phenomenon. A mysterious global process that is only in part detected, like the visible aspect of something in a different dimension, leaves us with the solution to one riddle by confronting us with another. As we proceed we discover that we are in the field of evolutionary models and thinking and that the emergence of civilization betrays a distinction of micro and macro aspects. We are suspiciously close to the world of the noumenal or 'thing in itself' of Kant and Schopenhauer.

The debate over evolution persists because the origin of species in deep time is not observed save by looking backward. That has enabled a kind of hallucination to take the place of real theory. We see the factual history of lief with increasing clarity, but theories of that are not so easy to find. We start with the critique of Darwinism in order to rescue the idea of evolution. The question of 'evolution' in history is somewhat different but begins to ground the idea in specifics, among them the suddenly obvious fact that an evolutionary process must take place over a region and that this occurs

in a kind of transition via that region. This process shows a resemblance to what is called 'punctuated equilibrium' although that term is not really specific and we will be careful not to use it. But the idea of punctuation, some impetus, followed by a settling into equilibrium, is a useful metaphor.

This idea indicates a novel way to consider the key concept for some kind of model. Previous attempts to explicate history have taken the idea of a civilization as the unit of analysis. Toynbee and Spengler, for example, take this approach, and look at the life span of a such an entity. But the problem is that 'civilizations' are amorphous entities with no real interior structure or overall dynamic. A better approach is suggested by the 'eonic effect' itself: a series of transitions in a pattern that generates overall evolution. We can detect these transitions in the way massive clusters of innovation suddenly appear in the course of a civilizational complex. Examples are the period of Archaic Greece or the suddenly take off of ancient Sumer.

We will explore the larger implications here: first we examine the eonic effect, and some steps toward a new kind of model. Next we examine the background of evolution, its significance and real meaning. Finally we explore the implications of our discovery in terms of cultural ideologies, and the stance of the futurist. The question of modernity is bound up in this issue, and the ideologies of Darwinism and religious historicism blind us to our real historical situation. Man emerges from evolution into self-evolution. But the latter would require

A key aspect of our new type of model is the distinction of the action of a system of some kind and the action of a free agent. And this raises the paradoxical issue of the 'evolution' of freedom, and our discussion will suggest one part of an answer. If we propose science we think that a rule of causality expresses the behavior of that entity, but in history we confront the issue of free action by the agents of history. We need a new way to put the two ideas together, which is at first strange, but we can easily find examples already known to science. We cannot reject historical determination, but we can't scientize away freedom. The eonic effect shows an answer.

Since we are immersed in the system under study as in place creating new episodes for the general account it seem the whole analysis is preposterous. But the strangeness of the analysis in fact indicates a new form of coherence. But we must ask how we can arrive at an understanding of the greater whole in which we are immersed and in which we can alter the outcome. In fact that is a key property of the evolution of freedom and we need a need kind of model to study that.

This discussion raises the issue of design arguments, and while that subject is the field of multiple religious dissenters from evolution we can actually welcome design arguments beyond any theological interpretation. The riddle of design pervades biological systems. The notion science must refuse such arguments is preposterous. Virtually every biological system known shows design and the explanation there is not an issue of theism.

We should note that 'eonic history' is universal in scope and includes the gestation of ideological perspectives. We must be adept to both seek the meaning of objectivity and the generation of rationales of action, something thought ideological. But the eonic effect grants no higher ground of analysis, and as we shall see science, and indeed religion, show what we call 'eonic determination'.

The eonic effect is an empirical given, and we must have already noticed it. That's true, but our perspective is incomplete, so we don't understand what we are seeing.

1---------**2**---------**3**-------?
----**2**---------**3**---X: our present

If we have a three term sequence (in which we are immersed) but see only the last part of the first and the start of the third (our present), we would be unaware of what we are seeing. But if our knowledge increases and we discover up to point 1 and before, suddenly we see that we are in a sequence, of two eras and the starting point of a third. The riddle is suddenly clear. That is how we took world history, until the discovery of early Sumer and Egypt are point 1. In fact our sequence goes further back, but this is a start.

The eonic effect shows two aspects, a sequential logic and a mysterious effect of synchrony. We will look first at the sequence issue but point to the parallel aspects as we go along, with more in the next chapter.

This situation shows why a science of history always eluded us. Further, the question of history lurks in the background of human action and poses a riddle with respect to the nature and emergence of man, without that we can hardly speak of a complete history, or find any explanation.. In an age of high technology we look for a science of that chronicle of centuries but the nature of such an endeavor remains stubbornly unresolved. The reign of ideology and religious historicism beclouds our views and we tend to be victims of various forms of social propaganda. There the reign of evolutionary theories creates an additional set of assumptions that tend to inject a kind

of theory, the example of social Darwinism being a good example. The Darwinian claims for natural selection posit the action of that principle to drive evolution, therefore human action might replicate that effect through the injection of evolutionary thinking, now an ideology, into assumptions about human interaction. Many have pointed to the fallacy there, but what is the nature of that fallacy? This assumption about randomness blinds us to the clear structure of history. Further the issue of free will enters. It is the difference between a machine and a simple story with living agents.

> Science searches for causal laws, and such laws won't work for history because of the factor free agency, but a larger meta-causal 'something' is clearly the long sought clue for an evolutionary 'science' of history.

Now let's see how our diagram explains our historical confusion. Before the explosive rise of modern archeology, the core historical chronicle, with religious conceptions in the background, tended to speak in terms of an almost mysterious epoch from the period of Homer onward to the classic period of Greece and Rome, or the Old Testament, in the Occident, and in the Orient, the legacies of Buddhism, Hinduism being an inchoate primordial backdrop, and the twin traditions of Confucianism and Taoism. A strange parallelism frets these 'beginnings' and buttresses a sense of one's 'tradition' comprising a sort of epoch of proximate antiquity roughly centered in the first millennium BCE.

This period shows us in fact the creation of 'history' as a discipline or proto-science and we can see that figures like Herodotus and Thucydides invent the subject in Greece while in the case of Israelite phenomenon, religious historicism comes to the fore with an historical prelude to their actual history in classical times. We should note in both cases the history of the classic period and the complicated mythological wrapper that envelops the primordial beginnings leading up to the actual histories in real time: the Greek archaic period begins to take shape out of a fog that is assigned to Homer and his saga, which we now know to represent the Mycenaean period. In Israel we see a similar semi-mythological history of the era of the Canaanite world interacting with that question mark, Egypt. Let us note the double character of the Old Testament, whose history is in quotation marks until the period after the time of Solomon when an actual historical record emerges of the remarkable and strange saga of 'Israel' and Judah. We should note the period is closer detail to see that suddenly around 600 BCE, or so-called Exile, the question of 'Israel', put into quotation marks next to the twin states including Judah, became the object of blending with

the Persian world and that the emergence of monotheism we now see is a hybrid, a most remarkable circumstance, an no coincidence as we will see. In Greece, we see in parallel the remnant mythological trappings of Herodotus yield to the revolutionary attempt at historical objectivity as Thucydides muses over the Homeric corpus, attempting to evaluate the Trojan war as an historical event. Let us note the resemblance to the issue of modernity where one again we see a kind of feudal and in some sense 'medieval' world suddenly give way to a new epoch.

There is something very odd about this as we note in two cases the historical myths of a kind of medieval predecessor yielding to a sudden onset of what constitutes in the end a new era in history. From around 900 BCE to the around 400 BCE we see the onset of new 'civilizations' or cultural complexes in both Greece (and as we will see, Rome) and the Middle East. These new beginnings coexisted with mysterious outstanding civilizations, in Egypt and Mesopotamia. And they did so at the fringes of those elder mysteries. The status of these older worlds was mysterious, yet taken for granted by the Greeks and Israelites, and we are left to wonder why, like acorns, near great oaks, these two upstarts become the platform for a new future while the older civilizations began a long decay. We should the ambiguity of Persia: it was a novel cultural phenomenon, and yet mixed, if not entangled, with the legacy of the now ancient realms of the Mesopotamian enigma, whose origins were then lost to view, appearing like denizens from a past that had disappeared. We should note that just as Israel appears next to Egypt (with of course many influences from Mesopotamia) so Persia is a sudden upstart next to the Assyrian world. The puzzle here is that beside so many civilizations coming into being we witness the strange case of Israel/Judah and the strange 'disappearing act' of Israel and Judah, and the birth of a new idea of the transnational and the universal witnessing in the birth of a new form of religion.

The archaeological revolution of the nineteenth century has now revealed to us the world prior to Greece and Israel (Persia) and we can see the stunning solution to the riddle in the revelation of the sources of those twin worlds in the discovery of Sumer and the sourcing of Egypt virtually in parallel in the period just before ca. 3000 BCE in the beginnings of the dynasties that were to endure for millennia. This extension of our historical perspective constitutes a net addition to our sense of the eras or epochs of history and the classical to modern progression, still mysterious, shows us hints of an answer in the way Sumer and early dynastic Egypt fret a new time period

in world history. We seem to have the following chronology:

the era of Sumer and Egypt...
the classical era
the modern era

We should note that both Sumer and Egypt both seem to 'start' in the centuries just before 3000 BCE but that they in reality have an earlier history of some kind, one that archaeology is also beginning to discover. But the period from around three centuries before 3000 BCE is decisive: a kind of take-off effect occurs in both places, and we see the invention of writing in both, in Sumer the sudden appearance of a constellation of city-states and in Egypt the first Pharaoh and the beginnings of the Dynastic era. Despite increasing evidence of earlier inchoate beginnings the period just before 3000 BCE shows a massive cluster of innovations, and what was often called the onset of 'higher civilization', a very dubious characterization perhaps but one that in fact shows the sense of rapid transition in the period indicated.

The world of civilizations is underway, leaving the question of what came before. We confront a sort of 'hey, wait a minute' here, because this looks like still another of our cases of a sort of medieval early something suddenly spawning a new era in world history. And it is a new period indeed. Sumer and Dynastic Egypt for the next millennia will create a definite field of what we can call 'civilization' for the first time and their influence will spread globally as far as the far Orient, and even, as many suspect, the New World.

This leaves us with the question of what came before: but we know now the answer to that, the so-called Neolithic period. The lack of writing means there are no records but we can still begin to see the way the beginnings of agriculture and small villages seem to token the obvious beginning before the beginning. Some will argue this is also 'civilization' of some kind, and we can agree, but note that the difference is scale is one of degree and that many of the cultural forms created in this period constitute the framework of human political and economic culture. In many was this is the birth of the State with all the implications of that construct, whose implications are still with us, and whose Middle Eastern histories were rapidly put into writing as the new technology created in Sumer and Egypt created what many call ' (recorded) history'.

We should note that onset of the modern period, if it truly shows the onset of a new era, and the evidence is almost obvious that it does, is evidently still incomplete in comparison with our other two examples and if anything just

getting underway. So there we have it: a world system with three eras, the last of which is our larger present. We have just stumbled on what we will call the 'eonic effect' which simply means we see a set of intervals or eras in world history. Once again we have the same format: a new beginning in the middle of a long stream of history. We think of beginnings as something absolute. But perhaps these beginnings, like Mondays in a year of weeks, are what we should call 'relative beginnings'. A 'Monday' is a relative beginning inside a year of weeks. In three cases we see a sort of medieval blur from which a sudden new onset of activity seems to create a new era. The factor of randomness is a falling stock at this point.

The implications of this utterly simple structure are at once obvious, and yet enigmatic. We will discover in its field the resolution of many of the mysteries of both history and evolution, and if the result is still not science it is nonetheless we will suspect a clue to such a science. Our procedure is designed to be transparent: examination of historical intervals, that is chronology, or periodization. This approach is not speculation and proceeds in the most obvious way...until it confronts the entirely unobvious, in plain sight. But let us intrude on something that is possibly controversial, yet still empirical: the observation that our first two intervals are equally spaced, about just over two thousand years in length. Chance? One way to tell if something is random might be to try and see it if is connected in some significant way to other data, itself significant in some way. It is like a puzzle: the whole set of pieces remains unsolved but we can immediately see if one piece fits another piece. If the two pieces show a part of a face, it strikes us as more than a roll of the dice.

Appendix 2: From Life's Origin to The Dawn of Human Culture

From WHEE

4.2.2 From Life's Origin to The Dawn of Human Culture

The mystery of the origin of life, and the so far intractable character of the enigma, remains an invariant of discussions of evolution, and should caution

us that without an understanding of the beginning, excessive confidence in the now standard explanation of evolution after its beginning, the Darwinian scenario of natural selection, is misplaced. Our eonic perspective suggests immediately what is wrong, as a red warning light goes on, but we cannot use it to solve a problem for which it wasn't designed.

A Noumenal/Phenomenal Mystery Our brief consideration of Kant's Challenge uncovered the way in which the dynamic of our 'eonic evolution' was not visible while the phenomenal aspect was visible as the eonic effect. We suspect immediately what is wrong with the origin of life debate, beset by the egregious claims of design theories. The dynamics of life emergence, whatever the biochemical details, may well have a noumenal aspect. That is very different from confusing the issue with supernaturalism.

There is something entirely odd about the beginning of life. It arises relatively quickly in the wake of planetary formation, in seeming defiance of probability. Within a relatively short period of time the passage to the RNA world, and then the DNA world of the cell is accomplished. In fact, the era of unicellular life is much longer, and the onset of the 'animal' in the era of multicellular life leaves us the clue, one we still do not understand, the sudden and rapid emergence in the Cambrian era of all the standard body plans that will fret the era of life to come.

4.5 billion years ago: formation of the Sun, planets, and earth
3.7-3.8 billion years ago: origin of life
1.5 billion years ago: appearance of eukaryotes, sexual reproduction
550 million years ago: Cambrian era, multicellular organisms
500 million years ago: vertebrates appear
250-150 million years ago: first dinosaurs, mammals, birds, flowering plants
55 million years ago: first apes

From the Cambrian to the era of Primates seems a short progression compared to the far longer period of one-celled organisms since the dawn of life. We seem to confront precisely the kind of pattern, expanded to a larger scale, that we have seen with the eonic effect, a basic directionality on two levels in the course of development. It is the collation of the two levels that confuses us. This is the great heresy of evolutionary progress, but we suspect the obvious, an evolutionary ratchet effect, and our perspective suggests 'stepping progression' would be a better word, in the sense of an

effect reaching new successive plateaus where microevolution takes over. This approach preempts the fallacies of teleology by keeping the different levels of action distinct, although directionality in the final analysis is a brand of teleology, save only that we make no statements about a telos, instead looking at the relative motions of successive steps. S. J. Gould, always so critical of the idea of progress, suggested nonetheless the right framework, that of punctuated equilibrium. That idea, however, is not the same as that of natural selection, and should be taken in a generalized and minimal sense, as a descriptive patterning of evidence.

In fact this stepping progression is visible at all stages of evolution, from the first step of the origin of life, to the Cambrian, and the emergence of man. We should consider one further such stage, on a tentative basis:

The Origins of Mind Although the exercise of seeing the unity of man and nature, man the third chimpanzee, is one of the great insights of biology, one we should embrace, at one and the same time the suspicion arises that the stage of man crosses a threshold in the origins of mind as significant as the origin of life itself. The physical realm, the realm of life, and the realm of the cosmic, for lack of a better word, a realm that transcends life, yet mixes with it, stand together in a complex unity that we so far fail to understand. The stage of mind is a threshold to a stage that brings history to evolution.

Ethical Action The evolution of man is more than a question of 'mind'. It is also a question of 'will', and the ability to make choices in a contemplation of potential action. No account of a naturalistic ethics has ever produced an adequate depiction of this aspect of man, let alone of its evolution. In our formulation the distinction of consciousness and self-consciousness is one avenue toward reconciling the contradiction, and mediating the transition, whatever it was, to man as we know him, in principle capable of freely chosen acts, and liable as such in courts of judgment. This is always coexisting with the slovenly and disorganized fluctuations of self-consciousness between willful action and mechanical reaction that are so characteristic of man.

It is possible that the 'evolution' we see in the eonic effect is giving us a record of this transition. However, we should be wary of using the data of the eonic effect, to jump to conclusions about a problem it is not designed to solve, but we suffer a sense of déjà vu, and a frustrating realization that the standard accounts are probably backwards because they don't take into account the interplay of two levels we see in the eonic sequence.

Surely the emergence of a basic 'evolutionary toolkit', the world of evo-devo, in the realization of the potential of developmental sequences, should

be a hint that the basic regime of natural selection is at best a secondary process. And yet we are led to believe that this tool-kit arises by chance, when many of the generated sequences themselves were once incorrectly ascribed to random evolution. Clearly the complex interplay of the two is precisely the kind of macro/micro level action that we have begun to suspect for historical development.

We can make such statements now without the dialectical intractability between directionality and randomness that tends to overtake all discussion as it founders at the limits of reductionism in the antinomies of teleology. Scientists are rightly bunkered down in purely causal analysis, but as the Kantian perspective reminds us this reductionist regime will nonetheless prove insufficient. This is seen in the 'symptom' of teleological action, namely, the unsettling discovery at so many points of so-called 'fine-tuning'. As to teleology, the mode of its realization is unseen, but we can at least see that ratchet directionality is not incompatible with the facts, for we see the evidence is open to the same two-level analysis we have discovered. Such discussions are so distracted by theological sideshows of theists and atheists that the probably obvious cannot be considered, the cosmic imperative, in the phrase of Christian de Duve.

Scientific wariness at this is more than understandable, but the plain fact of the matter is that the development of life falls as well into a pattern of directional evolution overlayed on the random. Once we grasp the pattern of two levels at work, the typical confusions of Darwinian analysis are seen for what they are. We can see that there can be an intermediate set of alternatives, such as the alternating or on-off directionality we see in the eonic effect. We need to consider that, just as with history, the greater evolution of life is operating on different levels, as this produces both differentiation and the relatively random play of forms via the microevolutionary processes such as natural selection, and a larger direction setting process that always selects on strain of its multiple outcomes.

This perspective, taken with great caution as a range of hypotheses, without metaphysical extras, might help us to see that the evolution of primates into man is probably two kinds of evolution overlaid, a 'stream and sequence' effect, just as in world history. The branching outwards, the failed lineages, the plateaus of stasis, should not blind us to the way that, most improbably, a clear set of stages is visible in the record, leading to the final appearance of modern man.

The recent discovery of so-called Ardipithecus suggests the earliest stage

before the emergence in parallel of man and chimpanzee. By five million years ago we see the separation of man from these ancestors of the chimpanzee, and in this strain of the bipedal ape visible in Australopithecus we see the beginnings of a series of relatively brisk steps up a ladder to the final crossing of a threshold to the first man-ape, homo, from homo habilis, thence to homo erectus 1.7 million years ago. With homo erectus we have first true 'man', a bipedal tool-making hominid who stages the first exodus from the African continent into Eurasia, differentiating into the Neanderthal in Europe. No coherent theory has emerged along Darwinian lines to account for this.

5-7 million years ago: separation of chimpanzees and first hominids

4 million years ago: first australopithecines

2.4 million years ago: homo habilis

1.7-1.9 million years ago: homo ergaster/homo erectus, first exodus from Africa

300, 000 years ago: ?Neanderthals branch off

200 to 100,000 years ago: anatomically modern man appears in Africa

100 to 50,000 years ago: appearance of behaviorally modern man, second exodus

A stream and sequence argument would fit this data handily. The 'streams' of continuous evolution producing several side branches from Australopithecus to Neanderthal cross a threshold in the period ca. 200,000 years ago, and then somewhere in the period from 100 to 50,000 years ago a ratchet transition occurs that produces the finishing touches on behaviourally modern man, who then proceeds to migrate across the whole planet. This action must produce a creature that can use language, has a characteristic human consciousness, and the ability to innovate and create art. To say this has resulted from Darwinian evolution is a speculative claim. We can see the clear resemblance to the kind of evolutionary macro process in disguise that we are familiar with already.

It is once again from Africa that we see the next stage of man, and the final crossing of the threshold to homo sapiens. Around two hundred thousand years ago, or less, the first anatomically modern man appears. It is important to consider the distinction that arises at this point between the anatomical threshold and the subsequent, and still mysterious, threshold of behaviorally modern man who does not appear until after fifty thousand years ago. That leaves the period from around a hundred thousand years ago for us to find the explanation for a remarkably sudden appearance of the species 'man' in the sense that we now see him. The various multiregional

hypotheses have yielded to a basic 'out of Africa' scenario, in which the new species, dramatically ahead of his ancestor homo erectus emerges from Africa in small bands and proceeds within a very short period of time to what is the first of several great globalizations of man.

This new man, it would now seem, is quite distinct from the Neanderthal, with whom he seems not to have interbred. And within a relatively short period of time we see the rise to sole dominance of the 'out of Africa' man who has achieved the passage to all of the characteristics of the human species, from language, to art, to conceptual thought. We have already broached our speculative suggestion that in the eonic effect we can see how this development of behaviorally modern man can occur via a macroevolutioinary sequence that is more than genetic and that can operate on entire populations as whole units.

We can draw no final conclusions on this point, save to feel a little more comfortable with the facts that we have, clearly outlined, for example, by Richard Klein and Blake Edgar in The Dawn of Human Culture, suggesting that as of fifty thousand years ago a 'great leap forward' had occurred. Klein notes the clear application of the idea of punctuated equilibrium to the evolution of man and points to four such events in the descent of man:

1. 2.5 million years ago when flaked tools appeared
2. 1.7 million years, human versus ape-like body, more advanced tools
3. 600,000 years ago, the rapid expansion of the human brain
4. 50,000 years ago, the 'great leap forward', producing modern man

These stages roughly correspond to homo habilis, a somewhat questionable transitional figure, but one showing the first advance toward man the toolmaker in the so-called Olduwan phase, then homo ergaster, initiating the new phase of toolmaking the Achelean, and his immediate successor homo erectus who stages the first exodus 'out of Africa'. Next, we have homo heidelbergensis, and the accelerating transition to homo sapiens as a body type in the period after 200,000.

This perspective on the last stage of human transition has been challenged by findings that show a more gradual emergence of the traits we now ascribe to man in the period from ca. 300,000 onward, but the two perspectives are not necessarily contradictory. In other words, still another continuity/discontinuity dilemma, grist for our mill. The stream and sequence metaphor is being confirmed here by the obvious pattern of double facts.

And the idea of the 'Great Leap Forward', or the 'Big Bang' of human evolution could have a slightly different meaning from the purely genetic

evolution considered by biologists.

Out of Africa Klein and Edgar begin their account with the Twilight Cave. This cave in the East African Great Rift Valley shows artifacts of 40,000 years ago of advanced toolmaking, but more tellingly ostrich eggshell beads, whose symbolic significance is suggested by their persistence to contemporary !Kung who have maintained this technology as an exchange or reciprocity medium with neighboring tribes. This would constitute a token of the dawn of modern humans.

Our perspective on the eonic effect warns us that even with genetic innovations in place a larger transformation is required to effect the realization of the new potential. This is exactly what the facts suggest. And the question of language evolution simply will not go away. Our perception of the eonic effect should remind us that even at the most advanced level of human development a mysterious evolutionary macro process is detectable. How much more likely it is that this would this be needed at the earliest stage of human emergence! And let us note that our statements here are not (necessarily) about genetic evolution. Jumpstarting an already present potential requires explicit action from a macro process.

Let us recall the clear evidence of the Axial Age, in which we can see rapid emergentist development across the whole spectrum of culture in relatively isolated regions, and this in short bursts on the level of centuries. Our feeling about what we see from the evidence of a 'Great Leap Forward' is that the religious, linguistic, artistic, and other, evolutions of man occurred likewise in some kind of concentrated evolutionary sequence, relatively but no absolutely isolated geographically, undoubtedly in Africa, and then that a small contingent of this new man became the basis for a new globalization of the result.

The beginning of our tale, then, is appropriately the second of the 'Out of Africa' sagas, beginning somewhere between 80,000 to 50,000 years ago. Out of the blue, modern genetics has given us in the analysis of mtDNA and the Y chromosome a complete set of histories that can locate and map the migrations of early man out of his African home. There are a considerable number of variant hypotheses here, some considering a migration through Northern Egypt to the Levant, and beyond. But the genetic data now suggests a single exodus, and the likeliest candidate is the crossing of the Red Sea at its southern end, the so-called Gate of Grief, from Africa to Yemen in a period when that still relatively easy to cross, most probably island hopping with boats or rafts. The evidence suggests one unique migration, by a small

number of people, perhaps only several hundred. The great migration then proceeded along the coastal highway of the Arabian coast all the way to India, and then all the way to Australia. There are a number of timelines for this great migration, depending on just when man reached Australia, but the basic scenario is clear from the genetic record.

This shows that the first migrants followed the 'beachcomber' route all the way to India and East Asia. Significantly, a branch of this migration headed north in the vicinity of Pakistan and finally reached Europe, often known as the peoples of the Aurignacian period. Our basic framework is set for the transition to human settlement, then agriculture and the forms of higher civilization in the period after the Last Glacial Maximum.

50, 000 years ago: the passage 'out of Africa' toward India, the beachcomber trail

46, 000 years ago: first evidence of modern man in Australia

45,000-35,000 years ago: exodus branches in India takes over Eurasia, and enters Europe

45,000-10,000 years ago: Upper Paleolithic, Aurignacian, Gravettian

10,000 years ago: onset of Neolithic

This period is the first great flowering of modern man, despite the challenge of climate in the worsening fluctuations of the Ice Age until the Last Glacial Maximum around 20,000 years ago. This period of man the hunter-gatherer shows the capacity for general innovation, art, proto-religion, and the full capacity for language. It also shows the devastating impact of man's advancing technology on the environmental balance of species, in the multiple extinctions of man animals confronted by the human diaspora.

There is something remarkably convenient, and mysterious, about all of this. Man is repeatedly 'evolved' in Africa, and small subsets of the result commence their global migrations. Although we see microevolutioinary effects in the Eurasian sphere, for example the emergence of Neanderthal in the European Ice Age environment, we see no real large-scale effects, with true speciation occurring only in Africa. Say what you will, but this is quite suspicious.

The hothouse evolutions of man in the African Eden, accomplishing all the major transitions, set the stage for all the rest. We can at least see this as confirmation of the basic spatio-temporal architecture of punctuated equilibria. We should consider the image arising spontaneously of a period in Africa, perhaps in some Ethiopian Eden, not far from the jumping off point, 'out of Africa', where man consolidated his linguistic evolution in a period

not unlike that of our eonic series, in the emergence of his characteristic cultural forms, perhaps riding on the realized potential of music, song, and choral association. The man who will emerge is a story teller, a musician and singer, a creature whose emerging self-consciousness will leave him at the threshold of what he will hallucinate as the 'spirit world'. It is very difficult for us even as modern men to correctly evaluate this side of man, since we are that man, and subject to the same limitations of consciousness. The data of the eonic effect can give us at least a suggestion of how thic could be.

And 'after Eden' there comes into existence a hominid who begins to destabilize the global environment that he begins to discover in his movement across Eurasia, and then into the Americas. For the first time, unlike homo erectus, who seems to remain in relative equilibrium with is outer world, man has the edge in his dealings with that world, and this increasing mastery shows a want of his own self-mastery as he begins the long cycles of species extermination across Europe, Asia, and the Americas. This upset equilibrium impinges, of course, into our own time, as the species character of man provokes a crisis of his future evolution.

THE EONIC EVOLUTION OF CIVILIZATION

We have completed a basic introduction to the eonic effect and the result is an exciting insight into the evolution of civilizations. But in fact we have barely started. We move toward the idea of a model, and this chapter prefaces the model in the appendix. A model is really a question: we see the outer form of a dynamic, but what is it really? The process is a mystery: creative, super-computational, with a teleological abstraction delimiting actual realization in time by free agents.

> We have changed the usage of the term 'evolution', now called 'eonic' evolution, which we can see now is by a process of elimination the right category. But our usage is that of an empirical map which has to be constructed in each instance. The idea that natural selection can explain all cases of evolution in deep time sight unseen is absurd. Note that we observe on a limited scale and the idea of evolution at a given moment seems absurd. But the incremental eonic effects over ten thousand years have completely transformed a Paleolithic culture into an advanced technological civilization.

We are forced to consider an eerie assumption, conjecture: eonic effects must be at a higher level than the most sophisticated of its outcomes: memory of the evolution of man, scanning cultures over centuries, focussing on geographical regions, seeding religions, democracy, kibitzing art, literature, packaging literary traditions as with the Bible. The list is awesome. The rise of the modern is especially stunning in its range of outputs, wryly so-called.

You can argue that correlation is not causation and that any such active process must be 'dumb energy'. It is hard to know, but raising the quality of its output to the highest of aesthetic production can't be dumb energy. It looks like intelligent design, but we have no candidates for such an adjective. The idea of divinity has fallen away leaving us with some kind of planetary biofield able to operate like some kind of Gaian magic. Since the outcome shows development, we can call it evolution, but that is a formal definition. Between reductionist scientism and theistic mythology we have missed 'evolution' completely. Now we see its mysterious teleological drive and creative power. It is not surprising the Israelites detecting their own history sought a theistic interpretation. But as we look backwards from a later perspective we see the 'eonic effect' losing control of its own outcome and produce a result that, given its contradictory and chaotic outcome, could never be ascribed to theistic omnipotence. The outcome is a mystery we suspect is flawed. The Jews were trying to describe the eonic effect and did so in terms of a divinity. But in the end was doomed to be a mistake. 'God' would be indicted for sloppy work, the jackknife of two religions instead of one as with Mahayana in parallel as a form of Buddhism, the strange birth of anti-Semitism, and the muddle of 'free agency' as system action fades and the outcome becomes a 'man-made' collision of two religions instead of one, or so we suspect. Every point here is contested. We must be wary of taking sides here. But overall we sense the outcome as bad or flawed software. And the future will produce the Holocaust, millennia later. That calamity is completely out of the range of the eonic sequence and is a total mystery of fascist politics as human free agency in tragic mode.

This is not god in history, but, ...evolution, in our crude descriptive sense. After a slight sense of disorientation, the term will seem the right one, by a process of elimination. But that at first is like a brown paper bag to hold data. But we can see the connection to earlier evolution, and so the usage has real content. There is a reduction of the term to some kind of 'creative force', but is not an explanation. There is an easy way to connect eonic evolution and that of animals: they both show the higher system action, speciation, and emerging 'free' agency. That key connects early and later evolution is a beautiful synthesis of two elements in the same category.

The eonic effect is very strange at first and needs incremental explanations. Strange, but not difficult, as description. The core ideas are about one page in length. The model potentially is designed to be the same as the airplane view, but as it starts to expand. So you already have the model.

We have qualified the term 'evolution' as the 'eonic evolution of civilization. Although we suspect a deep connection to the earlier evolution of organisms, the two are very different. Eonic evolution remorphs civilizations in place and concentrates on social, political, artistic/literary, etc, aspects. In archaic Greece the disorganized stream of poetic epic enters the transition interval and, ZAP!, out come two great masterpieces of epic poetry. So how does watchamacallit do that? The place of Homer, so-called, here, is not clear but he is a clear case of free agency under system action, assuming he existed at all. The Greek transition has endless examples like this. Note the resemblance to biblical text streams: the streams of ur-sagas about Israel enters the transition region and next to the staccato appearance of prophets melds as a series of versions of a 'bible' which by the period 400 BCE is the classic bible in place. The eonic sequence knows how to package literatures. These examples are completely baffling but we can see at least what is happening.

This kind of example is tricky but as we zoom out we see within a rough three century interval all kinds of things like this and they influence the idea context of a culture to move into a new future. The Greek Archaic and immediate succession produces an epic literature at its dawn, a vast succession of literature including the tragic genre, the birth of history, of science, of philosophy, a first democracy with its associated republicanism, Hippocratic medicine, etc...Then it all comes to a stop and the system decays rapidly into empire, first Alexander.

That's a strange kettle of fish compared to the evolution of birds, but the term 'evolution' seems right. There is no final definition of the term. People use the term colloquially all the time to suggest development of some kind. Ours is like that: a colloquial term seeking admittance to science. But what science? We can go further and suggest a connection. The reason we suggest a connection to organismic evolution is that history and evolution overlap: the example was the evolution of animals toward locomotion, agency and autonomy, climaxing with primates and man. Or the climax is some new future species. We spoke of the 'evolution of freedom'. We end with homo sapiens pondering free will and books of Kant as he appears at the modern divide. Another reason is that civilizations are about men in locations. But the same is true of organismic evolution because that evolution occurs with species over a region as a whole which is very strange and complex. With eonic evolution we see directly that evolution acts on groups, regions, and subsets of species. And those regions might be a network of city states as in

Greece. We are in over our heads. This aspect of our thesis we won't insist on. Our basic idea is that regions show accelerated innovations and these change the course of history. But we suspect the connection as noted with evolution as evolution generating history, via regions, cultures, civilizations. And most disconcerting is the absence of genetical issues. This process deals in abstractions, ideas. Note that civilizations are not the unit of analysis. They arise ad hoc (we suspect) as village, town, state, but the eonic process remorphs only time slices of those constructs of free agency. The rise of the state might however be taken as eonic evolution, and so on. All of this is in the context of some cosmological process. And here we pulled a rabbit out of a hat, fine-tuning. Physicists discovered a very important aspect of cosmic evolution and then disowned it. So it is their fault if we pick up the stray idea and consider it for our model. Fine-tuning is teleology, verboten, but it is the thinking of physicists, a sort of aside it seems. We ponder the mystery of evolution and of civilizations and the idea of some kind of anthropic principle springs to mind. But we suspect that physics has already stumbled into a solution to our mystery.

Toward an eonic model...

This is the point at which we transit to the 'eonic model' and we will outline that here as a guide to the longer version as an appendix.

The core idea is that of 'transitions, our cluster of 'hotspots'.

We consider an idea of 'stream and sequence'.

The flow or stream of history shows discontinuous intervals

These transitions form an 'eonic sequence'.

The polka dot pattern can seem confusing but is very clear from a bird's eye view

Each transition creates a diffusion field as a new civilization

The transitions follow a frontier effect: each step
is in a new area.

We call this the eonic evolution of civilization.

This is seen in the sudden massive innovations
visible as 'eonic emergents' which create a new culture.

The Bible, or the Iliad, are classic eonic emergents.

We must distinguish system action and free agency.

The system 'evolves freedom' by starting points
and then leaving that to man to complete.

The sequence is teleological to an overview,

but its analysis is elusive because it can multitask
and because as yet we have no model of teleology.
Each transition shows a divide at its end
The divide tokens the switch to free agency solo.
The data suggests a frequency system, a staple of science.
The transitions show a frontier effect:
The eonic sequence never repeats, and moves to new areas.
It seems likely that the modern transition completes
the eonic sequence and that man is now on his own.

Our model is a chronology and designed as noted as the same as the airplane view, and then as a book so to speak with the Table of Contents again the airplane view. Each chapter refers to one of the transition epochs: thus,

Preface: looking backward at the evolution of organisms and then man

Chapter 0: man emerges and moves through the Paleolithic

Chapter 1, 2: civilization begins ca. 8000 BCE in the Middle East in the Neolithic period, the early and the late Neolithic. We might also include the Natufian as an earlier pre-Neolithic phase

Chapter 3: Sumer and Dynastic Egypt

Chapter 4: The Axial Age, Greece, Israel/Persia, India, China

Chapter 5: The modern transition

This polka dot pattern evolves via discontinuous regions, each transition at a new zone, each with a divide and its phenomena, and a larger epoch which it initiates. This is the 'stream and sequence' idea: not civilizations, but Civilization as a global endstate, evolves via well placed shots in the arm about 2400 years apart. After the Axial Age the eonic sequence has covered much of Eurasia, and jumps to far away Europe. The model is not Eurocentric in any way: the transient period of Europe is yielding already to a global oikoumene. This is not a form of conquest. The rise of Christianity (and Buddhism) for example generates an 'oikoumene generator' via an idea of community of cultures sharing a religious ethos. The Bible was a master stroke tool for this purpose. This was at its start a purely information-diffusion process. But it became mixed with Roman imperialism. But by the time of Columbus we find that the whole thing has degenerated and become conquest and genocide, a terrible failure of the basic process.

Again,
In essence the eonic effect is fairly simple to a bird's eye view.

> The evolution of world civilization shows a hidden macro driver operating in a frequency sequence that shows teleology. This sequence can split into parallel tracks operating synchronously. The reintegration appears in our own time as a first global oikoumene. The result appears to be a planetary or Gaian 'cradle' effect for the final stage of human evolution: The Great Transition. Man must confront the suspicion that almost all the achievements of higher civilization are system generated, but with the realized outcome due to free agency. It appears that this driver will disengage at which point man confronts the realization of his freedom at the end stage of his evolution as it becomes history.

This chapter is really a lead in to the Appendix: A New Model of History. The reader can also move to the Conclusion form here.

Endnotes

We need to deal with both the persistence and dangers of the airplane view. We kept repeating the basic thesis in each chapter in versions of that 'airplane view'. In that sense it is very easy to point to the eonic effect. But suddenly we enter into a vast discussion in terms details seen as we zoom in. Just as we finish we start all over. We have examined the birth of monotheism by the Israelites, but as we zoom in we see that during the Exile, which so spookily occurs just at the divide, a group of 'Israelites' is transported to Persia where their incipient theism is blended with the Zoroastrian brand. This was a remarkable gesture it seems to create an Aryan/Semitic hybrid. A fact lost to history but now resurfacing.

The detail like this is endless. This is the real core of our discussion. We must be careful of our conclusions. The eonic effect is the possession of speedreaders in a game of endless data acquisition, but in the end we are all in the same boat. To proceed the reader must digest about a thousand books, then ten times that, to start, and that is not going to happen all at once as the basic account passes into historical phantasm. However, our model is designed to deal with this situation: it operates in two modes as an airplane view, and a gateway to a vast universe of data.

In fact it is possible to get a handle on the eonic effect in a summary fashion, if we are careful. A useful feature of our discussion is that it works as a meta-view: we can continue to study the times/places in question but the eonic effect will remain relevant as the data increases. That data could falsify our interpretation, but that is unlikely. A good example is the history of Old Testament Israel and/or Archaic Greece. What in fact is the history of Israel? Its study is complex, research has completely changed the account, and the

result is very different from the Biblical version. Once we graduate from the biblical myths, the subject makes sense in terms of our approach. Our views of Old Testament history have been transformed entirely by generations of Biblical scholars. But, amazing to say, the more this is researched the more it seems to fit our model. None of the basic general insights of the eonic effect in this era change.

This kind of research involves hundreds of books. And it is one part only of the regions of the eonic effect, each with their own hundreds of books. But in a strange way we can use our 'outline, chronology, model' as a study in transition in the context of ever increasing research. Another example is *Archaic to Classic Greece: A History of the Archaic Greek World*, by Johnathan Hall. The Greeks practically invented the modern world: science, medicine, philosophy, literature, history, tragic drama, democracy, rhetoric, the list goes on. The Greek transition was a stupendous apparition in the desert of stream history.

The point is the obvious danger of a kind of hallucination. Let us note however that Darwinism is far worse here as it induces mental image of survival of the fittest scenarios that are imaginary and what is worse, then applied to society. The ideology of social Darwinism has perverted social interaction and been taken up by economic propagandists preaching competition.

But the eonic effect is a discovery for the era of Big Data and computers: we need a kind of audio-visual software that can depict the eonic effect easily in its different levels with notes, footnote jumps, and images. The eonic effect is a challenge to the human mind which in fact can absorb far more data than we might realize. The eonic model invokes the need for new means of transmission.

There is an idea of 'reachability': to what extent can we reach the data of the eonic effect? In a sense we can envision but never reach the foundations of our model. In another way at some point we have enough to begin some kind of evaluation. We should acknowledge the point, and here we can consider the nature and value of general summaries. As we zoom in and zoom out we detect the dynamic indirectly. Thus, the eonic effect with a little caution can be an ongoing study and at the same time a usable general perspective. At a certain point we can cautiously try to evaluate new views of history. We note the case of the Old Testament as a cargo cult base on incomplete eonic data, as the 'god' model. Our minimal model can be of help.

Just before we zoom in, the model is thus in the end simply the

chronological outline of history based on a system of transitions, an eonic sequence of those transitions, some of them in parallel. Each transition has a divide, shows some kind of frontier effect, must distinguish system action and free action, and we posit that the sequence shows directionality over and above the stream of history. We strongly suspect this stands in the category of 'evolution', as an unseen form factor seeds cultural innovation in the periods of transition.

We have been using the model all along, but here with some beginning comprehension. Until we can resolve the nature of the dynamic in question the two are the same. The situation resembles stage magic: it looks miraculous, but then there is a simple explanation. Same with the eonic effect. One candidate for that 'simple explanation' is the idea of creative energy: at a stroke many, but by no means all of the display of creativity seems incomprehensible. After examination the ideas seems not to quite work. The idea is another orphan on the doorstep of science. The requirements of a theory are almost inconceivable, machines operating over tens of millennia, creating directed change in whole cultures, and reflecting both the fact and value domains.

We should look again at our airplane view. If we ask, what is the model? The answer is as below, the airplane view. It is also a Table of Contents for a history of the world.

?Neolithic: Middle East, ca. 8000 BCE (two eras?)

Sumer, Egypt, short interval prior to 3000 BCE

Greece/Rome, Israel/Persia, India, China, interval prior to 600 BCE

The Rise of the modern, interval from 1500 to 1800 AD

So our model is a chronology, suggesting a stupendous macroevolutionary process of transformation over long intervals of time. We remain in the prophecy of multiple new sciences of greater nature and a hidden technology of civilizations, evolution, a term confiscated from Darwinists in their extinction phase, and set to point to hidden form factors operating over transitional regions. Do we have any leads here? We should consider what all the other hard luck cases do, skulk through fine-tuning arguments: in the field of cosmic inflation the emergence of stars and planets generates cradles for life evolving, and then mind evolving, and in a related context, civilizations evolving. This invokes a general process of evolution as an aspect of cosmology and the latent properties of planets. That's the best of luck theory in progress for a general science of eonic effects.

Since the model is an unending chapter in a expanding book we should consider the inevitability of possibly premature conclusions as we consider the infinite labyrinth of data for our subject. A non-random pattern, the airplane view: a fall back position. Included also in a separate Appendix is another version of our 'model/chronology/bibliography/database'.

The model then is like a lisp program: dynamics and data are mixed together. That makes it easy to study once a foundation is laid. The model is thus the outline above which is a chronology, a bibliography, a Table of Contents, and database.

The basic idea of the model is a set of transitions, as above, a suspected extension into the Neolithic and a growing sense that the early evolution of man (and perhaps earlier hominids and the rise of animals) has a similar dynamism.

The transitions are rough estimates about three centuries in length and each has a divide point at its end. The transitions show both system action and free action of free agency. The transitions an outline and man executes its realization. The whole scheme suggests a frequency hypothesis of 2400 hundred years on a sliding scale: 3300/3000: 900/600: 1500/1800 with divides then ca. 3000 BCE, 600 BCE, 1800 BCE.

The divides are very significant and show hidden properties we will explore. The modern transition shows a very definite divide and we can see the spectacular cluster of innovations as we approach the divide. The transitions follow a 'frontier effect' or 'acorn effect' and occur outside by often near the prior area.

The transitions can appear in parallel or in sequence: the latter is the eonic sequence: the eonic evolution of civilization. The modern transitions has no Eurocentric implications (in the long run) since it is the seed point for a new global civilization.

The transitions operate by creating diffusion zones and these become new layers of civilization on the old: e.g. the Greek transition turns into the Alexandrian diffusion zone and spawns a whole new civilization.

We suspect the modern transition will be the last and that man will be on its own from now on, a very perilous moment as we can see from antiquity where the era after ca. 400 BCE commenced to decline and never rose to the heights of its starting point. Occidental civilization degenerated into empire, and then finally the various dark ages, middle ages, etc...

We must be crack shots at the eonic effect and prepare for renewed historical autonomy.

Man wishes to reach the stars but is alien life going to show any interest in man? Look at the record of history with any number of variant ethical systems, Kantian to otherwise. The verdict is there if you can face it.

Conventional historians, Darwinists, etc, will tend to reject this as speculative history. Scientists will go blah/blah about causality and no free ill etc,... Theologians will express their faith in a biblical history now a phantom. Don't be fooled. We made our starting point a non-random pattern which is a solid foundation. Criticize the model all you wish, but be sure to study it. This model is indeed confusing. Rarely does a ramshackle model such as this produce such a cornucopia of insights.

We conclude with a piece de resistance example: why does modern or rather 'classical' so-called music correlate so exactly with the modern transition? It appears out of Renaissance genres around the time of Monteverdi, accelerates in the eighteenth century as orchestral and operatic genres, peaks at the divide ca. 1800 (cf. the sudden climax with Mozart end Beethoven, coasts into the nineteenth century through Verdi, and Puccini, and then nothing. A figure such as Wagner is a kind of transitional coda figure Beethoven senses the endgame in his later quartets), and then the whole spectacular sequence comes to a stop and musicians almost baffled by their sudden endgame move into tonal music as if to move forever past the almost miraculous seeming 'eonic effect' called 'classical' music. We are left to wonder: no eonic effect, no Mozart, no Beethoven.

Finally, consider that just as in antiquity, two centuries after the divide democracy is in peril. Coincidence? One would think not. An uncanny logic pervades our admittedly crude model.

We must get smart and prepare for a future we are abandoned to and which we must turn into technologists of history. Not so simple if that requires being able to plan dynamic sequences of culture generation over ten thousand years. You must explain how to make Mozarts and Beethovens appear in such an operation.

The eonic sequence may be the cosmos' gift to man: he must learn its secret and bestow it on another planetary system perhaps. A little homework needed.

We can invoke science but a new science must deal with facts/values, consciousness, ethical/aesthetic mysteries and meta-technologies so far unimagined but making the era of the Industrial Revolution (now with a climate crisis) seem 'early hominid' cave man stuff. This new science must understand for starters how to construct a civilization machine that can induce the creation of music in such as Mozart and Beethoven, if it can

scan whole continents over centuries to find genius' in local populations.

This model restarts and expands in the Appendix, A New Model of History. The model is so elementary t hat it is barely more than and outline as the 'airplane' view. The second appendix summarizes the model as a mini-world history, an account of its evolution, a Table of Contents and a bibliography/database. The eonic effect has a simple explanation as 'creative energy' somewhere between Bergson and New Age mysticism. That isn't science, but is an engaging simplification of something ultra complex.

You can move to the Conclusion, but don't conclude anything much until you have touched all bases. This is a serious school boy crisis: homework, books, and books and the books in their footnotes, ... The age of computers and Big Data meets world history and its factual infinity of data. Thousands of tricky or else easy questions quiz us at all points. This short chapter is really a gateway to either the Appendix or the Conclusion.

Man has passed through ten thousand years of developmental realization, much of it still barely visible and coming into view especially with the invention of writing in Sumer, and Egypt. But the real 'evolution' is via a set of 'transitions' embedded in the streams of civilization. The non-random pattern is the default position, or backup view: we invoke and challenge various interpretations but the basic pattern is not really falsifiable.

Since we are immersed in the system the question of objectivity becomes critical. Science is output of our system, prompted twice as it began fade. The same appears to be the case with democracy. The eonic effect is elusive and complex and will not yield to religious myths, or scientific reductionism as current. What is it that we are seeing? The right category we increasingly suspected is 'evolution'. With an important caveat: we present an empirical model of 'evolution', not a theory.

Our idea of 'evolution', despite invoking a latent form factor, is completely natural and simple but defies the Darwinian conception. That theory is a crackpot thesis that has fallen into the grip of a politics of culture that must have a cover story for anything not yet a basic science, and a means to 'refute' the design arguments of the theologians with a loony theory of random evolution. Few ideologies have done more to perpetuate religion that Darwinism.

Our usage learns the lesson that 'theories' are very difficult, but empirical descriptions are like a brown paper bag. The issue is not the bag, but what it contains. Our usage of the term 'evolution' is right almost by definition.

We have shown the overall format of an evolutionary transition, but by no means have we resolved the mystery of evolution and its reciprocal first born, history. It has a powerful 'form factor' invisible to us that impinges on man's self-consciousness to generate the creative energy for the realization of cultural forms. We can see finally that this process is not 'god in history'. But its mystery remains as a potent generator so abstract to view that we can barely depict its action, and not as yet its essential core. Modern artificial intelligence has suddenly produced suggestive explanatory frameworks and although not directly applicable they can suggest that the range of naturalistic explanation remains an undiscovered country.

The only possible range of explanation to our primitive minds would be a kind of biofield with computational omnipresence able with a sort of territorial scanning to analyze stupendous data sets and generate continuations via the creative action of human free agents. We cannot evade the implication of stunning scales of computation that can survey cultural totalities. That throws the problem into a planetary scale and a kind of Gaian cult of the 'earth computer' able to process civilizations and their species. If that's preposterous we can file it away and expect the next hypothesis arriving soon. The puzzle resolves around a science of planets, a master psychology of man and organisms that yields a science of consciousness, a deeper understanding of creativity, art, including music, and the nature of creative action in fields spanning centuries in given geographical regions. Evolution takes place over a region where some form factor becomes active. That is the key to our idea of transitions.

Our account, while not complete, is sufficient as a first introduction to the eonic effect. The reader might note the way we started simple and ended in an expanding flood of details. We can press the reset button once again, to attempt a conclusion which will itself start to take off into more and more detail. The relevant material has expanded steadily and now suddenly we confront a floodtide of tens of thousands of relevant texts. However the reader has by now a rough picture of the phenomenon indicated. The reader can begin to look at WHEE and especially to start reading works of history cited there. The day is coming when this kind of study will be facilitated by Internet resources.

Based on past history man is in real trouble once the macro driver disengages, as it did following the 'Axial' interval transitions. The whole system went into decline and never recovered.

We have discussed design issues, and even 'intelligent design' several times. We have warned that the ID group has undermined their own position. Design might well look intelligent, but unfortunately that proves every little.

A strange thing has happened. Our design argument has undermined the Old Testament design argument. How use the concept of 'intelligent design' if the Old Testament gets it wrong? Now armed with the right warnings, we can declare that this process looks, seems, superintelligent, with a computational capacity that is stupendous. But we have distinguished life and aliveness, consciousness, and 'will'. None of them will work: this is something that stands beyond 'life' as a cradle, is not likely to be conscious in our 'human' sense. Surprisingly the best match is the 'will', but in the sense of Schopenhauer: the idea of cosmological 'smart' laws that connected with fine tuning physics and some kind of teleological mechanics.

> We will indulge one small helping of 'science fiction' with the obvious suspicion: our process is a supercomputer of Gaian proportions as a biofield. The point is the suspicion that biologies of life are planetary sciences. We must be wary of the terms, 'alive', 'conscious': we cannot apply these to this context by analogy.
>
> Note what seems the stupendous action here: this process can function over tens of millennia, induce creativity in all categories, not least art, scan cultural fields, focus on particular regions, make ethical computations, operate at the level of individuals, and more. We will leave it ambiguous, for this is the point at which a cargo cult emerges. Not on our watch. The rest is silence? This paragraph is the caution to speculative, theological, or even reductionist arguments. Let us note further that in the age of AI the term 'intelligent' starts to take on a mechanical meaning, so much for design theology. But clearly we are missing something. These remarks might stall the impulse toward enthusiastic mysticism of 'conscious' planets, and the creation of a religion. Well we might with what we have so far. After all if the Israelites created a religion of the eonic effect why shouldn't we?

So,

We see the onset of higher civilization in the lead up of three or so centuries before 3000 BCE in Sumer and Egypt, but we can see clearly that this is really a tale 'in media res' and that sometime after ca. 12000 BCE homo sapiens begins to discover agriculture in stages, and then in two eras of the Neolithic beginning in the Levant of the Middle East ca. 8000 BCE and then ca. 5500 BCE in northern Iraq and spreading diffusion regions, a phase at the threshold of what then becomes the thunder clap the full flowering of higher civilization begins. We suspect that all the basic categories seen

later emerge in the Neolithic but we do not have a documented transition here, although our model shows us clearly the basics of an account. The diffusion of the Neolithic is probably planetary, entering and covering the field of Africa, Far Asia, Europe, and we suspect the New World. But the hypothesis of independent discovery of agriculture should be considered. However, our model reminds us that technical advance and the cultural transformation in tandem are two different things. High Neolithic culture is not the same as the diffusion and/or independent discovery of agriculture. But man had tens of millennia to discover agriculture independently (and may well have noticed the 'seed' phenomenon many times), but within two millennia after ca. 8000 BCE it suddenly becomes a fact almost everywhere. Not a good argument for independent discovery, expect marginally.

We suspect that our story really begins at the dawn of homo sapiens and that our model of fast evolution had to apply in some fashion to the emergence of man. The reason is the interconnection of so many different processes, the 'spandrel' effect: consciousness, mind, language, an ethical and aesthetic spectrum, with intimations of a 'soul'. It is a New Age speculation that the New Man as homo sapiens acquires a 'soul' and with it a more intense self-conscious.

The question of 'soul' is so botched by religions that the idea has been almost eliminated in the secular age, but it won't go away.

There are mysterious soul traditions outstanding in Islamic Sufism which have never entered public awareness. Man already has a soul, and this other brand refers to something. It is a speculative suspicion that something like this is behind the inscrutable Egyptian tra

We can easily adopt a minimal version by noting that the term 'soul' really refers to the whole package of evolutionary innovations as 'mind' which is the outer tip of the iceberg of mind/soul or the basic brain apparatus in full, which seems to impinge on spooky physics just at the threshold of space-time. We need not adopt anything as belief here, noting also the Kantian critiques of such notions. We must suspect that if atoms have spooky aspect, so does the 'mind' complex of homo sapiens.

We are missing the factual data for what we can infer as the source of many later things: the period of the epoch after 5500 BCE gave birth we suspect to the complex mystery of Egyptian religion and in India the first versions of the great yogas to come later. Such statements are not 'official' in our model however. But what we see later, a prolonged 'medieval' religious preoccupation and then with the dawn of a new epoch, take off into a higher

type of civilization. The term 'secular' doesn't work, but the analogy is notable.

The temple complexes of northern Iraq in this earlier period seem to demonstrate also this religious factor followed by the more 'secular' period of later Sumer and the mysterious Dynastic Egypt which is by no means 'secular' in any sense. We remain ignorant of the mystery of Egyptian religion save that it seems to propose a kind of 'soul' factor that will pass beyond the degeneracy of Egyptian civilization by the time of the Axial Age. The gestations in pre-sand Egypt, so-called, and early India are notable but barely documented. It seems likely that Egyptian elements entered into early Christianity and then were lost. There seems however to be some such factor in the case of Islam, that has endured. But the 'great religions' have lost all sense of what they were supposed to be.

As civilization progresses the direct line of development can split into parallels, thus we see the great breakthrough of Sumer with a parallel in Dynastic Egypt. Then in the next phase a spectacular parallel emergence across Eurasia, in Greece/Rome to China This greatly increases the range of the advance and bestows immense variety on the gestating Eurasian field in China, India, Persia, 'Israel', Greece/Rome. This is the last chance for diversity in isolation, before the modern global oikoumene requires a single transition zone to bypass collisions of inconsistent effects. This garland of civilizations is then integrated as we see in our own times in the wake of the modern transition which has created (in part due to he capitalist process) for the first time an integrated global culture which still preserves many elements of diversity, a strangely brilliant outcome of our eonic sequence. But each of our transitional areas have devolved into a phase of imperialism (not the same as 'empire'), which was never necessary.

The modern transition is at first hard to understand but it follows our logic directly as a set of Frontier effects as all the regions at the frontier of the old Roman empire suddenly take off after 1500: Spain, France, England,Holland, Germany, and the ambiguous half and half case: northern Italy. Each of these start as diffusionist tutors of the exterior planet and end in imperialisms of greater or lesser degrees of exploitation. The ability of the Christian tactics of cultural assimilation were actually more successful as less violent but were long forgotten in the modern Christianity at the frontlines of the genocide in the New World. The confusion of capitalism and modernity is a serious one, one that tends to influence the modern left. The modern transition goes through an almost stupendous sequence of innovations long before anyone had heard the term 'capitalism'., which however in various forms has been

present from the beginning. The periodization can certainly be debated, but the real capitalism in tandem with socialism explode in parallel. That is a strong sign they will end in mutual interaction on the way to a new synthesis: the crisis of climate generated global warming has suddenly put a question mark next to unrestricted capitalism. As always our system has generated a failsafe, the dreaded 'socialism'. This is hardly leftist propaganda: the whole human experiment is at risk suddenly from global climate change greatly accelerated by capitalist processes.

We have seen how the modern transition explodes with a host of 'eonic emergents', peaking near the divide. Perhaps the most spectacular 'eonic effect' of all is the flowering of 'classical music' in the visible period from the seventeenth in Italy to the end of the nineteenth century but with the climactic moment with uncanny timing almost exactly at the divide straddled by Mozart and then Beethoven ca. 1800, before and after. It is hard to grasp how this could be a derandomized outcome with such spectacular timing. But soon system action passes into free action, and we see the world of Wagner, Verdi, then Puccini, and then nothing. We see the change already in late Beethoven (and then Wagner) who seems to tire of the melodic sweet shop and move into something almost discordant. This is to say nothing about the sudden appearance of tonal music post-Puccini save that it creates a dramatic caesura and moves into something totally different. The reader should brace himself to consider the mysterious derandomizing factor moving even into the realm of music. It is a glimpse of a technology stretching over millennia in a medium still invisible to us and still incomprehensible to us. This is perhaps a warning at our conclusion that technology as we know it is not sufficient to the creation of civilization. Many intangible factors as we have seen are the deeper reality and so far we don't see them at all, but we can now detect their effects, the eonic effect, singular or plural.

CONCLUSION: LAST AND FIRST MEN

We have reached the end of our introduction to the eonic effect as our discussion moves to the realm of our simple model, in the first and second Appendices. In fact, our model is simply the airplane view all over again, and we have designed our discussion around that, as we created a very simple way to expand our discussion into more and more detail. The explosion of detail is a lesson in itself as we confront a complex system of civilizations about which we still know little.

> It is suddenly obvious why 'theories of evolution' don't work. We musst study complex histories of Egypt, Sumer, Greece, Israel, India and Chins. Eonic Evolution does different things to different cultures, and has no general outcome in different times and places.

It is essential for science to move beyond Darwinism and our discussion shows the way to do that in the context of history beyond artificial idiocies like natural selection. There is probably no general theory of evolution available to us, as we work with empirical maps of evolutionary sequences. Tempting is an idea favored by a number of new agers, creative energy. It would explain everything at once, except itself. We might point without endorsement to Bergson on this point. The ideas of the new software revolution are intriguing. The Singularity was with us since the dawn of man?? We were good anthropologists about the Israelites' 'cargo cult', but we seem headed to our own cargo cult, of a mystic planetary Gaia/

That the evolution of organisms and civilizations are completely different is an important objection and yet we have felt confident in seeing the two as

directly connected. Our account suggests that in the 'evolution of freedom' the animal emerges to initiate history inside that evolution as the development of agency realized for a first in the legacy of hominids passing into homo sapiens. The issue of freedom, free will, and independent agency would seem barely realized as yet in human history. Jargon, but a clue perhaps.

It is our suspicion in any case that 'evolution' is a branch of cosmology and that the study of fine-tuning might be relevant both to early evolution and to life in civilization. The emergence/evolution of civilization looks like a directed process.

There is probably no general law or process of evolution. We must map its action at each of its creative intervals. We get a glimpse of 'evolution' in history, but we have no such record in deep time. Our model suggests some hints.

We have challenged monotheism but that is essential given the hopeless confusion of the 'god concept', whose status is that of the last conceptual version of paganism, the male god alone in a pantheon of one. The outcome is also more than the often dogmatic atheism of the secular humanist which tends to its own confusions.

> From what we do see we might forgive the Israelites for thinking they found 'god' in history. But our project is forced into its own 'constructivist Frankenstein, if not 'god', then who/what', and it is 'conscious'? The terms of theism are thus entirely unusable for our type of model. It is useful to prune speculative notions confronted with the awesome and potent mystery of the eonic effect. That said, the idea of god acting in history and/or directly in the context of the mind of man has created great confusion and its era has passed. Just as monotheism led past polytheism, the next phase has been to move beyond monotheism to an open philosophical stance, one realization of which is 'secular humanism'.

But we have maintained throughout that history gives us a hint of evolution in deep time. The processes are different but our 'evolutionary machine' can apparently change gears and output new functionality in new and different contexts.

Computer scientists speculate on the Singularity but it would seem it happened long ago. Human history we must wonder is embedded in a mysterious evolutionary software operating on a planetary level. But such metaphors may be far short of what we are attempting to understand. This machine, far from the malevolent byte monsters of sci-fi about to engulf

Nature's Secret Plan

Kant's classic essay with its queries appears to find an answer in our model and its data. However, we are not Kantians explicating his sytem or even his essay (which has its own idea suggesting in 'asocial sociability'. We have simply cherry-picked some key ideas and shown how the data of the eonic effect easily points to answers. The correlation of democracy and two transitions, ancient and modern points to an answer: we see progess toward a (perfect) civil constitution driven by the macro sequence, and realized in the micro process of free agency, failing in the first instance.

The idea of Nature's Secret Plan has many problems as terminology but once we see the teleological eonic driver the idea of a driven realization of civilization qualifies for that concept. Note that 'democracy' emerges via system action but is realized as free agency, in each case the macro at or before the divide (600 BCE, 1800, followed by the micro). In the case of Athens this failed within two centuries and never saw a second attempt. Two centuries after the modern divide, we see that democracy is already in trouble. In any case, we can see that our model takes his essay in stride.

us, can process values, seems to have an ethical logic (consider the strange ethical protocol of Kant), an aesthetic calculus, a psychology of a generalized hominid, etc... If Buddhism appears as an eonic emergent then our Process must understand all about 'State 4' psychologies, more, able to generate such on schedule.

The eonic model soon becomes an almost intractable bibliographical 'infinity'. This is the point at which summaries come to a halt and reading must begin, the model is also a distributed bibliography. We must study two types of books, viz. the history of Greece as a stream and studies of the Archaic to classical period, the transition. In general we must study both history as a whole, and particular areas. The first presentation of the model in the first Appendix contains a chronology, the eonic sequence from the Natufian to modern times. The amount of reading required is stupendous, so we use the airplane view a base camp, wary of facile conclusions. This is the only path open to us since our model can only point to, but no more, a reality that is hypercomplex. We are talking about a machine that operates over a planet over billions of years, able to keep track of species forms, and upgrade them over time. The relation of macro to micro factors is not clear: evolution doesn't grind out templates: two separate processes appear to be at work: computation of templates and their testing in practice against a given environment. It is our claim/hunch/suspicion that this is concluding episode to human speciation as 'homo sapiens in civilization', it is a chapter to the larger evolution, and conclusion. As a speculative hypothesis let us consider a range of hominids in Africa beyond a hundred thousand years ago, and an eonic sequence applied to a given region with a series of transitions, sequential and/or parallel, in a sequence of sequences of transitions as recurrent phases of speciation. A high level process, however obscure to us, can in principle defeat the limits of the failed hypothesis of natural selection, whatever the details. We are left to wonder.

The result is short of science but only because of its ultra-complexity. It is remarkable what simple periodization has achieved here. But we can come to a core understanding in any usual science: we have no parameters open to measurement. The advance in our knowledge since Champollion has been stunning. No doubt the future holds the solution to our eonic riddle. We are left with reruns of 2001 as we hold fort in the balconies. We have barely mastered the many sequences emerging from eonic history: the genesis of Buddhism, and that of 'Hinduism', wary of the term, in the Neolithic. The mysterious world of Chinese Taoism, the monotheism of

Zoroaster, perhaps the real source of monotheism, the birth of philosophy and science, the tragic genre, still a strange mystery, ...

Although the resolution of ancient mysteries can be obstinately difficult, with the eonic effect we have a complete example in the rise of the modern transition. We will move later to a more complete account there. We can conclude by considering the prospects of man in the future. The eonic series has showered man with endless gifts and yet his view of evolution is still stuck in the realm of Darwinism, social Darwinism. It is hard to estimate the damage done by this lunatic theory in whose wake lingers nervous suspicions as to the sanity of biologists. But the eonic is likely to shatter our given beliefs, and the status of religion remains in limbo.

We appear to have reached the end of the given eonic sequence if it is true that we don't observe the eonic effect until it has finished its action. The implication of the model is that system action shuts down leaving only free agency. The future is hardly 'up for grabs' if the only candidates we see are Machiavellian politicians, retarded priesthoods, capitalist predators, and scientists with their religion of natural selection. We should end on an optimistic note by invoking the dawn of a New Man, but for the nonce he seems a complete idiot. Perhaps he has hidden potential. We can in fact suspect the potential of a New Man, but his sluggish present is of no account in the end. But the crisis of modernity threatens with an extinct hominid. Down but by no means out.

We have moved against the propaganda of Darwinism to get a glimpse, albeit indirect, of evolutionary transformation. How the biological community derailed into the confusion over natural selection without evidence for its speculative theory is unclear, but the result has been to discredit science. We cannot easily resolve a theory of evolution but we can manage a glimpse of its action, which is a complex natural force of almost awesome potency. We must methodically track evolutionary sequences in detail, a process beyond our capacity in deep time, but marginally possible in the limited data range of world history. The question of 'intelligent' design has no bearing on questions of the existence of 'god', and in any case the idea is so incoherent as to be unusable in any discussion. The thesis that 'god' exists fails if 'god' is to be beyond existence. That 'god' is alive is a form of paganism, and the idea that 'god' is conscious again since if such as the Buddhas are beyond consciousness as 'enlightened' then 'god ends up in a lesser state as 'unenlightened'.

We confront a mysterious, almost unnerving realization. Almost all of world

history looks system generated. To what extent does this activate human creativity or is virtually everything induced leaving all the confusions to free agency.

Free agency must however be the greater part of system transformation or the basic evolution of freedom meme would be self-defeating. We may be able to assess this better over time. But this is tantamount to producing Mozarts at will. But we must be vigilant, To be free agents we must learn from what we have leaned. We are on our own and the record of history does not induce confidence. We should be optimistic here: nature evokes man's own consciousness and memetic archetypal unconscious to allow us to say, Man Makes Himself...

Endnotes

Is homo sapiens a finished species? Will the cosmic evolutionary machine pass beyond him, is he destined to extinction in the hubristic display of his un-sapient tragedies, tragic flaws, so amply warned of in the eonic display of the tragic genre in classical Greece? Do we see Nietzsche's 'last man' or the first man as last transitional hominid? Homo sapiens, the tragic hero... It appears that the tragic genre is system generated. It appears twice in transitions. And twice disappears...*Exeunt omnes.*

Perhaps Nietzche, rascal boy of Kant-studien, himself is that sort of last man, from Kant via Hegel to... Nietzsche we see the entry of destructive forces aiming at 'eonic modernity'. Despite insighthtful notions of the 'geneaology of morals' his case seems destined for a good hanging.

We see the dramatic resolution of Kant's challenge and the eonic sequence as a realization, let us posit, of Natures's Secret Plan.

The modern transition shows us the whole process in our backyard, and yet the whole remains mysterious. The 'divide point, 1800, or interval', 1750 to 1850, is packed with 'eonic emergents', perhaps the most spectacular, modern 'classical' music.

Note: a theory of the eonic effect must at a minimum be a machine able to produce such music. That and much more. The stream and sequence aspect is richly documented from the Renaissance style, already a considerable legacy and the take off into the realm of a music of the modern type near Monteverdi with Mozart and Beethoven at the climax, one before and one after the divide. Chance?

This example shows that some cultural elements exist prior to the transition but complexify still further. It is the case with outstanding prior

levels of achievement: the fine arts are a good example. We see no real innovation in the fine arts in the transition: the already rich Renaissance tradition shows this aspect is already a human possession, and eonic transformation leaves it to free agency. Indeed, suddenly in the wake of the modern transition, a spectacular new art phase appears in the period from Cezanne to Picasso. In general, technology is passing in the same way into a consolidated achievement of man, self-sustaining: but the last hurrah is the clear eonic threshold process as the Industrial Revolution, and its innovations as 'capitalism', born many times already, but in this case a spectacular eonic emergent ushering in a new era of economy. There are many variant lead up versions of capitalism, but this case consolidates the many genres to a new order of magnitude as what we call 'modern' capitalism. And in close parallel the chase plane realm of socialism/communism appears in dialectical concert. We see the novel agent of capitalism, Adam Smith, just before the divide and the socialist wave, as with Marx and Engels, just after. We know what this implies and now at the point of uncontrolled capitalism and the climate catastrophe underway, the chase plan will soon overtake its target.

The reader might confer Section 6.11 of WHEE for a longer list of the hundreds of modern innovations.

> Of all of our transitions, the modern is the most transparent because we have continuous data throughout, and the result shows a clear overall dynamic and interior structure, in a unity stretching from the Reformation and Copernican Revolution to the Enlightenment and French/American Revolutions. And this transition falls naturally into two stages, centered on the seventeenth century, as the Reformation ignites the fast passage, the field clearing in the wake of the Thirty Years War, to give birth to the seminal first signs of virtually all the characteristic eonic emergents of modernity. The relative transformation of a small piece of Christendom on a northern frontier, the Protestant Reformation, is a classic instance of the 'eonic evolution of religion'. This 're-formation' is at first confusing in that it is a religious rebirth that remorphs into secularism.

Let us note that 'revolution' is in many ways a modern innovation. Gestating perhaps in the realm of the Greek city-states and elsewhere, it becomes a new social outcome in the compression of globalization where untouched areas become rarer and a 'revolution' in place must restate social axioms via a revolutionary process. But the genre is ambiguous and we see success before the divide and then failure afterwards, as with the Russian Bolshevik instance. The hidden clue is that our transformations will produce

revolutions on the way to democracy and that socialism cannot jackknife with its twin, instead must remorph as democracy.

The modern transition requires the study of five national histories: the German, Dutch, English, French, Spanish, in a variant mode, northern Italy, that mysterious and hard to fathom 'frontier' effect.

Let us note that revolutionary modernism begins in the Reformation and that Luther is matched with the mysterious Munzer whose primordial 'proto-communism' preceeds even the gestating democracy so visible in the English trajectory through its Classic Civil War up to the American revolution. The elusive contradictions of these outcomes and their blending with capitalism are the instant object of analysis by Marx and Engels just past the divide point in the ominous crystallization of modernity short of ecological sanity. Did the Romantic movement count for nothing in its emergence in its own Enlightenment? Our eonic system has already prepared for the ecological dangers to come.

We could go on like this for hundreds of pages: our subject has exploded and seems to find more and more significant data, in each of our eight visible transitions, each with a rapidly expanding biography.

We have proceeded across the span of world history to discover there a mysterious logic or design we called the eonic effect, given its resemblance to a frequency system generating 'eons' or epochs, i.e. fixed wave length: the Sumero-Egyptian era, the Axial Age era and the rise of the modern. A skeptic will protest that a near three term sequence is not enough. That is true, but we have in fact used our model to suggest a prediction: a frequency system of this type will have earlier elements in 2400 intervals: sure enough the data is most suggestive for two earlier transitions, and a third for the Natufian. We don't have the full puzzle, but we do have a subset that generates its own understanding, and that our subject is a chain link series of such transitions whose relative beginnings creative self-contained chapters that make sense on their own terms. Falsifying this frequency hypothesis is possible but unlikely. The overall gestalt works and has a rightness to it.

Again attempted falsification can be useful, if destined to fail, The demonstation of non-random pattern leaves a mystery that is not falsifiable. There is no theory to falsify except a frequency

> hypothesis. Our model is crude, but it works so well we left to wonder. Our two transitions in Sumer and Egypt might not be as packed or non-random as we think. And our modern transition is preposterous: we have just exited a transition and are free to change history or falsify the model. Preposterous, but it works and does justice to the data. Shall we reject the modern transition? Those who do so must then be content to do without the Reformation, the scientific revolution, the Enlightenment, the rebirth of the tragic genre, modern classical music, democracy, the Industrial Revolution or modern capitalism/socialism duality. Back to the Paleolithic then? Let us note with ominous precision the uncanny exact correlation of modern ('classical') music, with Mozart and Beethoven straddling the divide. To the list of 'hard things to do' arrives the 'mechanical' generation of the high aesthetic of modern music. In fact our fragment of a model works so well that we have grounds for confidence in its mysterious logic.

Again we await more research. But the hypothesis of two transitions at the 'relative' start of higher civilization is strong. Further we might also come to include the origin points of the Indus valley and civilizations which might show synchrony with Sumer/Egypt. Our point here is that our model is an hypothesis and is in motion in search of more data. There are many such issues we have barely touched on. Again, our argument is incomplete. That said, the odds against pure chance are astronomical. The data seems solid, but the interpretations might be another matter. And we staged our subject as demonstrating a non-random pattern. That result is rock solid.

Thus, this series almost certainly moves backward to include two Neolithic 'eons' with a prelude called the Natufian and our sequence possibly even stretches into the Paleolithic, although it is our hunch that the 'Old Stone Age' is a period of quiescence in the Great Transition, as the new species man is tested against planetary realities in a long era of free agency operating alone. After the diaspora of man from Africa, assuming the correctness of that assumption, his dispersal makes the concentrated action of an eonic sequence difficult, and we don't see a new start until the Neolithic, a new sequence that will globalize in ten thousand years, starting in the Middle East at the rough center of equidistance for Eurasia.

> We end with an ambiguous outcome: we see that the eonic series 'evolves' man in civilization, but is the evolution of man complete or

> will the species homo move to a new species of hominid? The answer in part depends on deciphering the enigma of evolution and especially in resolving the ultimate challenge: the supremacy of free action in the wake of the eonic series. The record of history is clear, if not a final judgment. We must ask if man can survive via free action if 'democracy' and 'abolition' are system induced. Human history inspires little confidence. But the test is not yet complete, and we are hardly judges.

The end of the eonic sequence?? It would seem logical that as man begins to notice the eonic effect its action comes to a stop and the modern transition is the last in the series. That provokes a case of 'nerves' in anyone who has grasped what we have said so far. If eonic system action concludes then man is on his own and the record of history might suggest the danger. What leadership, for starters, can come to the fore here? Politicians, theologians? Scientists are stuck in the nineteenth century on evolution, so they are goofs in motion. Man has to pull himself together and take note of the horrific decline of the Occident in the last era.

If we examine the eonic effect we can see that it operates with a mysterious ethical and aesthetic logic beyond its physical parameters. And it never induces war, empire, slavery as it waits the opportunity to see freedom effects. We should face the reality that most of civilization so far has been subject to the curse of slavery, a human invention. Marginal in Sumerian times, the practice grew to the point of overtaking civilization in occidental Roman times. We suspect modern abolition to be system intervention, an ominous conclusion. So what if there had been no modern transition: would man have endured slavery into the far future? The point here is that we have to be wary of the passage from system action to free agency. It is a dangerous moment. But then perhaps all the pieces of the puzzle are there, we may be able to solve it. But we barely use most of those pieces.

It is significant that just at the modern divide a series of critiques appear, of reason, ethics, and aesthetics, a very odd yet significant set of subjects in a kind of dialectical triad. Our system follows some unknown ethical protocol. Perhaps a figure such as Kant appearing just at the divide is a hint as it were:

> **Kantian ethics**: One of the mysteries of the modern transition is the sudden appearance of Kant (followed by a whole school, plus Hegel, and even Marx and Nietzche). We have seen enough to consider this is no accident and that a new approach to philosophy appears just near the divide. One swiftly undone One of the mysteries here is the ethical substrate of the eonic effect, but the Kantian ethics of the categorical

imperative suggests the existence of a complex ethical canon with a simple mechanized realization as an eonic mechanism. Students of politics should wonder if the political realm is not corrupted beyond repair. Ask a politician and he might mention Machiavelli, and now we find the ethics of political action controlled by the artificial canon of war, covert action, and systemic lying, exploitation, and now even drone murder. We must suspect the realm of political action is close to a terminal state. But the fact remains that we barely use the gifts of the eonic series. Kant contains the key to a number of deep mysteries we must confront. No use waiting for aliens to arrive and do our homework.

Empire, and Imperialism Again we note that the eonic effect never, barely any exceptions, never generates empire. Note that the Greek transition produces republics and Athenian democracy, and a plea no less from Solon to abolish slavery. Then within two centuries the set up is in decline, and the recurrence of empire begins with Alexander, than in the end game the Romans. The whole history could have had democracy throughout, but regressed in empire and slavery. We must suspect most of proximate antiquity was a misfire.

The data of the modern transition suggests the exception to the way that the eonic effect never creates empires: each of the transition zones produces something we call 'imperialism' and that this is a black mark on the integrity of the history in each case: Spain, England, France, Holland, and Germany. The answer is very simple, we suspect: each transition creates a diffusion zone but then the dark side of capitalism and human free action invades the mix and corrupts the whole process of modernization. We can perhaps see the point in noting the way many Indians who detested the colonial regime of England also praised its deliverance and modernizing effects. The confused contradiction shows us the way the whole modern transition is corrupted by imperialism and that this is never generated by the macro system, but arises as free agency in, especially, the emergence of capitalism, so-called. In this context science injects the theory of natural selection with its suggestion that survival of the fittest does evolution, overheard by politicians, capitalists, and scientists as the clarion to violent interaction and elimination. Sad horror indeed.

The Holocaust: We need to make haste to note that the horrific Holocaust is late and after the divide and has no status in the evolutionary sequence. It is perhaps the most notorious case of deviating 'free action' in the wake of system action.

Slavery: If we examine the history of slavery, and in general of empire, imperialism, and exploitation, we notice the 'eonic series' never seems to generate war, slavery, or empires. These are free agency in the wake

of system action. Although slavery probably emerged in a side effect in the system of Sumerian city states, the civilization as a whole is still free of slavery, but that it begins to emerge in the following centuries in the Mesopotamian sphere, with a general history unknown to us. But we must suspect this is a disease of civilization never projected in the matrix of potential in the macro system: slavery is a human degeneration of real civilization, appears in the wake of Sumer, becomes endemic in the era of the next cycle and essentially undermines the whole era of Roman civilization as the result can progress no further. And slavery does indeed begin to die out after the fall of Rome, and by modern times, in an influence of Christianity, it is close to extinction, but then tragically reamplifies in the Atlantic slave trade in a combination of 'distant from core transition areas' and the rise of capitalism. Clearly civilization is in jeopardy here, it simply cannot continue or waste another cycle thus, and mirabile dictu an eonic emergent, abolitionism, appears just at the divide and within two generations an American Civil War, so like a feedback response still close to the divide, to preempt the catastrophe of further slavery (under the aegis of capitalism). Abolition of course still incomplete but no political system (with Stalinism under gaze) can any longer refound slavery.

Eleutheria A system operating on two levels has a dimension lost to flat history. Even as the growth of slavery accelerates the macro factor is seeded the resolution: the birth of the idea of freedom in the Greek period of transition, and its attempt at democracy, however limited, show a disease and its cure proceeding together. The legacy of freedom ideas will recur once again in powerful form in the modern transition.

One has to wonder given all this at the degenerating ethical canons of modern system systematically perverted by the very politicians proposed as leadership, and first in line to shake hands with arriving aliens. Hominid riffraff, from the personnel departments, no less. To be fair an entire cycle of religion proposed to create a moral context for civilization, with mixed result to say the least. To be fair, we must wonder at the deliberate promotion of psychopaths in the explosion of covert agencies and their connection with imperialistic politics.

The last transition?

In general the prospect of future evolution requires some direct action by man himself, but he has no leadership to do this. Religious, political and economic agents show nothing but their limits. If those three categories are to be the vehicle failure is certain. The last man, of Nietzche, poor devil,

struggles with the first 'man' defined in a future evolution. On the evidence, man doesn't have a chance here. But the saga is far from complete.

We are left with a strange suspicion, it is a frequent 'new age' speculation, that primordial man at the dawn of homo sapiens was very primitive, yet, but with a 'hot' dose of prime 'self-conscious' energy that sent him off into the future like a man shot out of a canon. The later reality seems that of a mechanized creature with less of the original high octane and the evidence of decayed shamanism points to a lost time and place of some original version at the dawn of man, a creature with little knowledge yet a state of consciousness of a high order. This may be speculation and we should be wary of this kind of conclusion but we should simply note that man rarely exhibits his real consciousness and lives in a more mechanized state of consciousness even as his knowledge increases. But that potential remains in man at all times and we see the eonic input attempting to deal with issues of consciousness. Whatever the case it is important to distinguish issues of knowledge and issues of consciousness. It is important to note that civilization has produced many attempts to address the issue of consciousness, and its problematical state. An attempt branch of civilization specialized for millennia just on this question.

In any case man emerges with a complex potential that with a dosing amplifier called the eonic effect causes to manifest an evolution of civilizations of increasing complexity. The mystery of consciousness and the interior content of mind are evoked in the creative moments of the transitions. The failure to complete a psychology of man complicates or forestalls a complete model or explanation of human evolution: man is inside at a lower state of awareness, perhaps, and can't quite grasp his own evolution, yet.

We cannot resolve the mystery of early man save only to note that the beginning of our account of the eonic effect would likely be in the realm of the evolution of man, mostly likely in two (or more) phases of homo erectus and homo sapiens. We cannot ascribe this to piecemeal evolution given the complexity of interacting effects: mind, language, consciousness, artistic and ethical awareness, and most controversially a 'soul', whatever that means. This shows the ongoing limits of human knowledge in the failure to fully understand what/who man is. Man does not truly understand himself or the complexity of his overall mental complex.

But sometime around 10,000 BCE a mysterious macro effect appears to ignite the onset of civilization: somewhere in the Natufian or before in

the Levant, in the middle east, a zone equidistant more or less to all parts of Eurasia. Our argument is complicated by the difficulty of distinguishing synchronous action and diffusion. Is the presence of agriculture in the New World diffusion, or independent discovery. The fact that agriculture looks like independent rediscovery in many cases is belied by the way it appears successively in all areas outside of its birth in the middle east.

The slow rise of Egypt and Sumer confuses us because the sudden take-off just prior to 3000 BCE is the better answer. A mini-Axial Age seems to show the parallel emergence of Egypt relative to Sumer, but a great deal of diffusion is likely also the case. Many cases of almost hopeless complexity arise: for example, what is the source of the yogas of India? The Aryan invasion versus Out of India debate has stalemated in double confusions. It seems wrong to consider that the Aryans brought yoga to India, but then the Vedas are impostors and can't be the source: there as are many signs that it predates that period by millennia, but not using an Indo-European language. Some perhaps oral tradition in another language probably goes back to the Neolithic. The translation of this into the artificial 'Indic Esperanto', Sanskrit confuses the issue. The astronomical observations clocking to the mid Neolithic in certain Upanishads thus suddenly make sense: they couldn't have been in Sanskrit which is directly parallel as Vedic to the Homeric Greek. Students here over and over miscalculate the speed of language change or devolution, and something like Sanskrit simply couldn't have existed in the Neolithic. A similar observation applies to the mysterious Jain tradition which may well go back to the period of the onset of Sumer and be a religious form for an entire age period up to the Axial Age. One of the strangest outcomes of the Axial Age is the way the Jain tradition 'concludes' while the Buddhist takes off in the Axial interval. The result is the onset of the Jain religion, but the waning of its yogic aspect. By contrast the Buddhist lineage emerges to become next to the monotheistic combinations a new world religion. In general, as in the case of Judeo-Christian monotheism we see constructs aiming at cultural integration of diffusion fields and that effect is clear East and West. The degeneration later of these is tragic and we should contrast the cultural integration of European tribal givens in the age of the Roman Empire with the genocidal folly of the age of the conquistadors. The Reformation tokes a new era and as so often the degenerated remains of prior civilizations undergo 'recycling'.

The Sumerians were one of the most mysterious yet inventive of people and in the space of a few centuries ca. up to 3000 BCE did what the Greeks

seem to do again later: invent the majority of constructs in the nexus of a first higher civilization. The concept of higher civilization is somehow arrogant, but the terms is clear enough as long as we realize that agriculture is a rather high level of achievement. With the Greeks we see directly the massive constellation of art and innovation that will found an entire cycle, and this shows us what is now coming into view from the Sumerian case, a cycle earlier. The diffusion fields of Egypt and Sumer are directly traceable east and west, but can't be confused with the prior substrate of the Neolithic. Thus the builders of the Stonehenge monuments seem strangely placed, but the traces from the prior Neolithic seem to provide the broad answer.

The Axial period ignites five or more diffusion fields and these give a balanced take off across Eurasia, with the specialized diffusion field passe-partout called the Bible a book for occidental diffusion zones. The classical period shows the most direct and drastic 'eonic effects' or non-effects: the passage from Athens to Rome via Alexander's 'diffusion field', etc, followed by the Roman then recharged with the Biblical monotheistic cultural integrator of Christianity shows a great success and then the great decline of the Roman Empire. Decline and medievalism are clearly eonic non-effects as the creative energy of a new era wanes and the system action effect leads to free agency, often an ugly given in the field of barbarous beginnings.

Christianity is one of the greatest puzzles: clearly it is 'free action' to the brief system action of the Israel/Judah period in the transition, but at the same time it is a mystery of its own and seems to have some kind of hidden influence that we have lost as keys to its understanding: the myth of the three magi is a good example and whatever its mythical status points to the obvious of different strains entering into a final synthesis, or hodgepodge. Thus the Egyptian, perhaps Indic, and Mesopotamian/Sumerian legacies seem to contribute some part of the mystery.

The duration of the medieval period is remarkable and the effect of the Christian religion seems directly connected to the slow disappearance of slavery, not finally accomplished, after as its disastrous reappearance in the Atlantic slave trade, until the modern abolitionist movement, as a prime eonic effect moves to its final elimination. As we look back on history to the period of Sumer and early Egypt we see that slavery did not exist at the start of higher civilization. It is a disease of civilization that arises piecemeal in the field of Sumerian city states and more in the medieval period of the Mesopotamian successors to Sumer. The Egyptians in the same early period built pyramids with patriotic conscripts, not slave labor. The disease of

slavery grew more virulent and passed into the next cycle by its inertia and we see the preposterous way in which the emergence of the freedom idea in Greece, *eleutheria*, coexists with the rising slavery of the classical period, the first experiments in democracy swept away in the Alexandrian period and the Roman juggernaut succeeds to its endless reign of faux civilization as barbarism with a civilization wrapper. This is a good example of the potential of a two level system that is suffering an exaggeration of its flaws with seeding of a resolution at the same time.

The Christian world seems to serve in part toward the process of abolition but not until the next eonic transition is the thrust of transformation effective. The legacy of Christianity is entirely a riddle even though its outer surface effects are transparent. We just don't know the details of its emergence and we can only wonder at the slick creation of an operational myth corpus of the New Testament. We must be wary then of trying to explain what is designed to be mysterious. Secular explanations can thus founder as easily as the Biblical accounts which hardly make any sense. But we suspect that elements later seen in Sufism enter the portrait: the 'prophet' who speaks in parables and performs miracles is both an Old Testament legacy but also some mysterious lore of the 'magician', and this may in part spring from Egyptian tradition. We may not soon decipher this riddle, but it remains true that its surface effects speak for themselves: an inspired prophet or guru with magical performance art and shamanistic 'trick or treat' appears ever so briefly as his legacy emerges despite itself with only a minimum of public interaction.

The rise of modernity gives a magnificent portrait of the eonic effect and the divide ca. 1800 is especially spectacular. We are thus two centuries from the rough divide line and this corresponds to the period ca. 400 BCE in the case of the Greek transition, the point at which innovation wanes and a long decline begins. We must given this (perhaps misleading) analog) be alert to the process of regression that can negate all advances.

We need no apology for the mixture of theory or model and ideology: we can't avoid this because the eonic effect itself produces those ideologies, in embryo, religions, philosophies, political frameworks. The ideology of freedom is especially relevant next to the clear dynamic of that freedom: we must be wary of oversimplified conclusions but we can at least feel confident that there is a way to both embrace an ideology in relation to its generation and change gears to consider objectivity in its relation to a given dynamic. From example the 'evolution of freedom' is a dynamical element, while

ideologies of freedom are real historical entities. An absolute objectivity is not within our means, and yet we can with caution manage a relative degree of objectivity.

This leaves us to wonder at the fate of 'democracy': it seems as if our system action has attempted twice to inject 'democratic formats' into our system, and just at the divide as the system action inducing freedom yields to man's own version, the creation of political realities. In the dismal progression of empires, wars of conquest, slavery, and tyrannical government, the fate of democracy as a preferred options seems indeed the focus of system action. That brings theory and ideology to a crux, but the point is clear: the eonic sequence aims higher than the degenerate forms of government that have cursed world history. Freedom in the state is a fist step, but then freedom from the state becomes the realization of individuality as a social person.

One of the most majestic aspects of the modern transition is the flowering of so-called 'classical' music rising from the transitional interval to a climax at the period of the divide, followed by a brief continuation, then a sudden fall off in the twentieth century. The correlation to the eonic effect is almost uncanny and leaves to wonder at how much we have to learn.

This is also a reminder that our riddle is more than technology which is in take off in its own but still short of the action of the eonic effect as such which shows 'techniques' far beyond our current abilities: e.g. seeding a musical creation sequence over several centuries!

The eonic effect like most theories of evolution induces a strong 'design' sense, which has been very controversial. Scientific biologists have fumbled the ball here and their hysteria and fright over design arguments is unnecessary. As we have seen, contrary to much current thinking, the first casualty of design arguments is the idea of 'god' in history. This is the strange case where something that 'quacks like a duck' is no duck at all. The issue forces us to examine the wider range of philosophical/scientific thought to consider, in one direction of many, the factor of 'will' in nature which confuses us by inducing hallucinations the 'eonic effect' is some personal entity, is alive, or conscious, or all of the above. Although such intuitions are par for the course we hardly dare trust any of them. In Schopenhauer we may in fact be in a near miss in pinning the tail on the donkey:: the factor of 'will in nature' in that philosopher's brilliant account is closer to the idea of a scientific law than to a psychological faculty of 'will' and might well be a factor in the generation of cosmic bodies which clearly are not 'alive' or 'conscious' in the usual sense. And this is therefore not the same as saying

something is 'alive' or conscious. The point is that, as speculation, we might consider that will is universal cosmic law in a metaphor of involution and this generates cosmic bodies that have planets that cradle life emerging via evolution. The search for this science is in fact already under way. The question of design is thus either refuted once and for all or else kicked upstairs into some thinking about the 'will' in nature which indeed generates a sense of design.

We are left to wonder if something like the eonic effect is not present in all worlds where hominids emerge from evolutionary sequences, thence to a future still unknown but perhaps beyond 'man' to the degree man is beyond his precursor 'animal' forms.

If the saga of man is thought a 'cosmic' comedy we would do well to absorb the data on the 'tragic' genre as this appears as an 'eonic emergent' in Greece (and we would conjecture in some form first with the Sumerians) in the realm of Greek drama with its spectacular flowering in the fifth century BCE, notably in Athens. This genre leaves behind the key question, what is a tragedy? The riddle persists to this day and we confront still another portrait of the limits of our understanding, yet left with the record of Shakespeare (and Racine) in the early modern replicating and advancing the genre, followed by its near disappearance in an age of Hollywood and Netflix. The tragic genre is still another of the riddles of eonic effect yet stands transparently as a warning to man to be wary of any cocky assumptions about his 'will'. But by the same token we are left with the riddle of the 'will' in hominids next to that of 'consciousness' itself, in turn next to the life sense of aliveness. Are these not all distinct elements of a real human psychology?

We have found we suspect the key enigma of world history even if we have not as yet solved it. The crisis of the times is already a grim foreboding of the rapid decline of classical antiquity save that we have progressed we must hope beyond the sterile barbarism of the Romans to be able to manage our own rescue operation in a civilization that to slip away from our control.

If our analysis is correct we are probably moving out of the eonic sequence and left to our own devices must rescue ourselves from our own declines. We must document the evolution of civilization to a fine grain, to start, in a question about solving the riddle of the eonic effect thence to the now superhuman task of reproducing its effects and range.

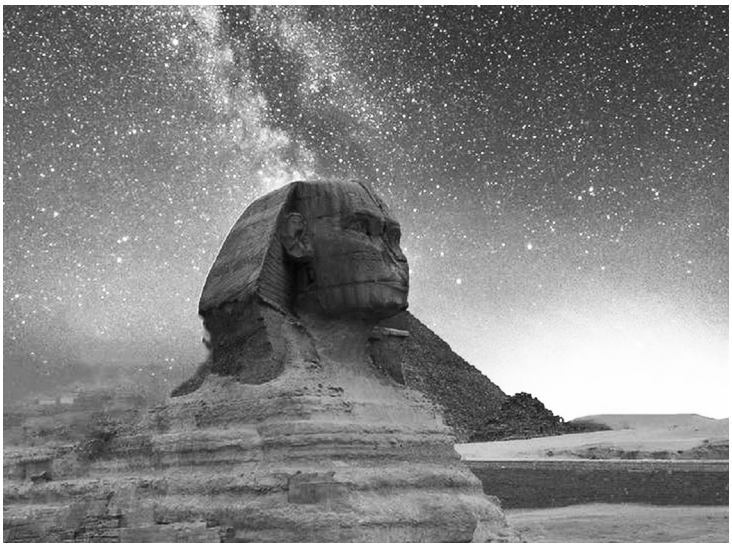
The ideological issue of capitalism and socialism is a fitting idea for a conclusion. In fact, we won't conclude anything save to note our observation that economic and technological sequences are not part of the eonic effect.

They have passed long since into human culture as given: that makes sense, man the toolmaker makes tools, but he may on may not know himself, and man the economic agent creates economies but these are secondary processes. The point is that these are continuous processes in history and not part of the eonic effect. The issue of capitalism is however somehow between the two: it emerges in the period of the Industrial revolution in its modern form, although in many ways it has always existed.

The point to consider here is that capitalism is overplayed as a phenomenon of markets subject to mystification and propaganda. We should simply note that the phenomenon of markets is very limited and at no point was the source of complex civilizations. We cannot therefore assume that capitalism can generate the future of civilization. The point should be obvious from our account. It is therefore not surprising that many attempt to ponder something beyond the capitalist legacy. A simple observation with a simple yet very significant conclusion. The path to terraforming is not confidently assumed by an alienation of the will to a market mechanism now despoiling the Amazon.

This leaves us with the mysteries of the modern transition and the way it spawned revolution as a path to foundational government. Here the legacy of democracy we saw as fundamental yet fragile. The obvious conclusion is that an emergent process is still in the process of discovery and foundation. In an era mesmerized by capitalism we have yet to ask even elementary questions about the nature of social organization and power and find ourselves with an overheating economic field still in need of basic definitions for a real state. The endgame here is likely that modern invention, the 'revolution'. But such as elusive as the eonic effect itself.

It is a old saw of the historian, man makes himself. Looking at the eonic effect we are left to wonder if instead man is a passive being in an historical generator. In fact we saw from the beginning that everything in the end depended on man's free agency. That is the verdict of the past, and now of the future. But the spectacle of planetary burnout, economic endgame, and political villainy leaves at first little prospect. But if we consider man beyond passive toss and turn in economic alienation we can hope that the riddle of civilization might become clear to us and point to the emergence of real man in the Great Transition, still incomplete, and stalled in a primitive techno-economic age of inexorable decline. That is the case only if we are passive objects in history. To become active agents in history is the arcanum of the first men contemplating the fate, perhaps species extinction of the last men.



APPENDIX: A NEW MODEL OF HISTORY

Where least expected we have discovered a hidden dynamic in world history, which we called the eonic effect, the eonic evolution of civilization. The detection of the Axial Age, a term we will replace, is now seen to join the perception of historical directionaliy in a single stupendous pattern. We need to expand our perception of the eonic effect, and in the process create a model. This model is very simple, but what it points to is very complex, and something of a mystery. This model is designed to pass from ultra simple airplane view into a Table of Contents for an outline expanding into more and more detail:

0. Introduction: the Descent of Man
1.?Neolithic: Middle East, ca. 8000 BCE (two eras?)
2.Sumer, Egypt, short interval prior to 3000 BCE
3. Greece/Rome, Israel/Persia, India, China, interval prior to 600 BCE
4.The Rise of the modern, interval from 1500 to 1800 AD

This is a Table of Contents, with a Preface about the evolution of man, and a model based on a frequency hypothesis with period of 2400 hundred years. If this seems strange consider our strategy: it shows a non-random pattern. Why are the advances in world history unevenly distributed? The result is rock-solid, but hard to interpret. Our second appendix contains a

another version of such a model, as a chronology and bibliography. The latent factor of teleology appears as the directionality in constructing Civilization. We have no scientific canon of teleology, so we must be wary of the term. But simple inspection over time suggests directionality. The end state unknown. But keep in mind that a system evolving free agency, will stop at completion, and we can assess teleology. The eras begin with transitions which seed a whole epoch of development. Although fractal images are not any kind of exact model here, the situation does resemble the way we start with a top level image and then zoom in for more and more detail. The model is thus very easy to use and generates an outline of history, a database and bibliography for each sector. Plus histories of the in-betweens.

What this points to is dynamical entity of great subtlety, and stunning potency. It operates over the surface of a planet, must be able to scan regions, remember its history over tens of millennia, and ...the list is long. Small wonder the Israelites were stunned by their perception of being immersed in a transition. But the 'god' idea fails here: the 'it' in question does not respond to prayer, and a close look shows that the macro process cannot intervene as its actions fail, whatever failure means. Falling in medieval stasis or dark ages, or regression to barbarism, such are failure modes. The classical occident was seeded by the Greek transition but then nothing could intervene as everything slid into decline and never recovered until millennia later as the eonic sequence spawns a new transition (which follows frontier effect, somewhere else). We have summoned up terms of psychology, alive, consciousness, and that new kid on the block, the 'will' in nature. Plus scrounging for scientific concepts. We can hardly call the eonic process, alive or conscious, although the latter could have versions unknown to us. The problem is that if we forbid these higher terms as unscientific we end up in a false reductionism. The 'will' in nature might work but it has no simple content. But the will in Schopenhauer is 'thing in itself' aspect beyond the phenomenal. Scientists avoid such notions. One thinks also of the kind of thing now appearing in AI subjects: 'smart' looking mechanisms show some 'intelligent' surprises. Perhaps evolution is like an 'AI system learning as it goes along'. Such speculations may be pointless, but the eonic effect remains obvious to inspection, but stubbornly mysterious.

Note the dangers of the terms in question: to call something like a planet 'conscious' in the verbiage of 'New Age' thinking is a wild pitch: there are said to be four states, sleep, dreaming, consciousness (self-consciousness?), Turiya (enlightenment). In some lists consciousness and self-consciousness

We can briefly summarize our model and then define some new concepts further as we go along. Our model is based on the idea of transitions, like the 'puncutations' in punctuated equilibrium, inside general world history, are the Great Transition, the evolutionary emergence of man. These transitions have divides, and show a frontier effect. The eonic effect makes us think of a Gaian subject with a question about the nature of planets. The sequential and parallel aspect of our dynamic form a 'matrix' on the surface of the planet and we have to wonder if some further mathematical properties lurk. We proceed with the idea of transitions in a sequence, the Great Transition, or evolution of man and his civilizations. Our formalism of evolution will disintingish two levels, macro and micro. With organisma the macro is speciation, the micro adaptation to an environment. With the eonic effect, the macro is the transition as 'system action' and the micro is the individual inside the transition who creates its realization. We consider history to be emerging from evolution. It couldn't do that instantaneously:

evolution ----------x----------history.

They would overlap, in a transition:

evolution----------xxxxxxx---------history.

This transition would in turn become a series of transitions. We deduce from this reality of 'transitions. In fact evolution and history overlap almost from the start: the evolution of the animal. We can think of the evolution of freedom born with the animal and rising degrees of freedom in the emergence of free agents. World history shows a metanarrative of freedom, the discrete freedom sequence. Animals to man show developing degrees of freedom, next to consciousness and self-consciousness which is a kind of wrapper around the 'will', fiction or reality in the mechanical body that tends to overide the man.

are distinguished. And that implies that nature has low grade of consciousness and isn't 'enlightened'. The whole game is nonsense. The issue of consciousness is elusive however, so we must not jump to conclusions. It is as if we had an electrical device but could not understand electromagnetism in nature. The semantics of the term 'consciousness' might pass into aspects we are blind to. Our thinking tends to the sense that if something is not conscious it is mechanical. But the term mechanical with the eonic effect is almost as bad as 'conscious'. There could be infinite modes of It is just possible that the category of the 'will in nature' could be relevant here, but that is entirely speculation, and subject to howls of protest from buttoned down 'rigorous' scientists. Such thinking must also reckon with its context: the realm of the noumenal in relation to the phenomenal. Do we really want to use this kind of 'idealism' for our model. The implication is that we see only the outer aspect of nature or the eonic effect, Unfortunately, that appears to be the case, although we cannot provide any proof. Recall some of the feats of eonic evolution: it can scan regions and seed new literatures. In a range of hundreds of such feats.

Note the term, hypothesis: a three term sequence is strong evidence but no proof of a sequence. We are just past the threshold of discovery. You don't need to take it on faith. But as we proceed the interior evidence accumulates and becomes overwhelming. A system in frequency makes sense. Further we suspect Chapter 1 is really two chapters, two stages in the Neolithic, and even a third, the so-called Natufian, from around 10000 BCE: the stage of pre-agriculture, discovering that seeds can be planted. Further, as we exit the modern transition, we enter free action mode: the system is in shutdown and we are free agents. The future is up to us. Soon psychopaths will control everything, no? Note the downfield effect in the wake of the Greek transition: as the Roman republic declined and turned into an Empire, strangely a new religion appeared with elements of the Judaic legacy. A similar effect in India: Buddhism spawns Mahayana, in concert with occidental savior religion. Very spooky.

We could simply ignore eonic history and play fiddles as we please. Who cares, we may be at the tipping point to decline, but live for the moment. But in practice we are enclosed in eonic emergents: we will almost inevitably carry out the implications of the modern transition: consider the activities we received: the Reformation, the Scientific Revolution, the rise of modern revolutionary politics: democracy, liberalism, then socialism, etc, massive amounts of literature and philosophical innovation, the Industrial Revolution,

Concepts for depicting the 'eonic effect'

We will develop a set of concepts to describe the eonic effect:

The Great Transition: the evolution of man, but including world history

The Gaian matrix the eonic effect shows sequential and parallel evolution: a matrix on the planet surface

A formalism of 'evolution" as in the eonic evolution of civilization: also macro and micro evolution.

The relation of 'history and evolution":

The idea of freedom and the 'evolution' of freedom

Free action and system action

Consciousness and/or self-consciousness

TP1,2,3: turning points in history: first heuristic idea of transitions

Transitions and relative beginnings, the unit of analysis

Stream and sequence, discrete-continuous distinction

Transition and oikoumene, fields of diffusion

Transition and divides

Eonic emergents, creative incidents and effects inside the transitions

Sequential Dependency: a cultrual trait inherited by diffusion

The Frontier effect, also the 'acorn' effect

Econostream (economic histories)

Technostream (histories of technology)

These two terms are hardly used but invented ad hoc to remind us that eonic history, economic history and technological histories are not the same. Man has started to master economic and technological histories, but is blind still to the eonic history

The Eonic Sequence: the sequence of transitions

A Frequency Hypothesis Our system seems to follow a frequency pattern based on 2400 year intervals which are marked by discrete transitions three centuries in length in an eonic sequence overlaid on a stream universal history:

TP1: Transition 1: -3300 to -3000, relative rise of civilization

TP2: Transition 2: -900 to -600, relative 'Axial' interval

TP3: Transition 3: 1500 to 1800, relative rise of the modern

We see this stretching back into Neolithic, we suspect....This is like a glove: it fits over the data with too much precision but includes the key effedts within the given range. This could be overexact but it works.

a neo-capitalism (capitalism in primitive form is far more ancient), the list is long and almost exhaustive. We could then negate the directionality of the system, but in practice we will willingly carry out the implications of dozens to hundreds of eonic emergents. So the question is the style and quality of the free agency.

We need to be wary: this model is still a bit primitive and we can't be absolutely sure, if correlation is not causation, of what would have happened without the transitions. But more or less it is clear by comparison with what can before. This can a staggering realization: without the eonic effect we would still be in the Old Stone Age. We wonder what we would be like without the modern transition. No protestant reformation, no Newton or modern physics, no democracy, no Industrial Revolution, no capitalism/socialism, no Enlightenment, no...modern music. The list far longer, but, to be sure, we can't be sure just which innovations are 'eonic emergents'.

We confront a process in nature that we do not so far understand. This model is exhilarating, but it is also scary: we must find the courage to suddenly be alone in history. We must suspect we have passed through the last transition and that the eonic sequence is done.

Although the issue of fine-tuning is often exploited for speculative conclusions we should refer to its study as perhaps the only direction we can find toward resolving a stunning mystery. Further, the issue of teleology lurks in our results. We consider a new model of history demanding a new model of basic science: our suspicion is that 'evolution' is far more complex that we could have imagined and that the cosmological starting point in the wake of the Big Bang generates life in planetary systems and has its own science which we are moving to discover. We may brand this speculation but once labeled such we can consider cautiously the almost stupefying implications of our subject.

Consider the implications of just one eonic emergent: modern, so-called 'classical' music. We confront the suspicion this pinnacle of the aesthetic is 'system generated', a sort of demonstrative exemplar of our larger potential. But then we confront the scientific demand to explain the creative factor in musical discovery and creation. We are nowhere near even a beginning of such an enquiry, in the implication of future sciences.

The example of modern music is disconcerting, almost scary: note the eonic emergence of modern 'classical' music is almost perfectly timed to the eonic effect, as the modern transition, from Monteverdi to Puccini,

Archaic Greece: Stream and Sequence

Our stream and sequence metaphor is especially apt, and illuminating, in the case of Greece, which has both a long stream history, and an intersecting history in the Axial period. The whole effect is almost eerie and, furthermore, shows us the real key to parallel history of Israel/Judah, strange as that might at first seem. The Greeks would seem to have separated from their Indo-European ancestors in the period ca. -2000, and then entered Greece to stage the Mycenaean civilization.

1800 to 1400 Cretan and Mycenaean civilizations
1260 to 1230 Mycenaean attack on Troy VIIa
1200 to 1050 Dorian invasions, a Dark Age begins
From 900 Axial Interval to about 400
900 to 750 Emergence of polis, the spectrum of Greek city states
800 to 700 Greek alphabet and the work of Homer
650's onward The first 'age of revolution', republican poleis, Solon,…
500's onward Late emergence of Athenian flowering, democracy, tragedy, a scientific revolution, philosophy, and much more, cascade in a spectacular display
400's onward Clear waning of transitional effects, coming of Empire phase

Our model will suggest a 'fransition' from 900 to 600 BCE, a divide and then a fantastic flowering up to 400 BCE. The rapid fall off is unnerving and eerie. The divide at 600BCE seems artificial but later we will see that the appearance of Solon in the emergence of democracy shows a key property of our model: induction of freedom is still unfree but can switch from system action to free action: free action must realize a new freedom outside the transition. The timing of Solon is thus highly significant.

Although the reader may choke on our jargon, these examples add up to a hard proof roughly speaking of our thesis as defying chance. And in every case the reader already understands our terminology: consider the analogous situation of a third wheel on the first bike of a child: the third wheel reduces the degree of freedom of the child so the child can learn, then one removes the wheel for a higher degree of freedom, but the child is now free to fall. We process these mechanical situations at a glance. Applied to history in the large demands caution, but the analogies often work. The point here is that democracy arises as system action, and is realized by free action as the transition ends at the divide: and doesn't last long...

then nothing. That suggests, no eonic effect, no Mozart or Beethoven, both perfectly straddling the divide. But first we must detail our model.

We should face the reality of the post-religion secular era. In fact, note the legacy of classical antiquity: after the Greek transition, the process goes silent, while the Occident becomes frozen, forgets most of its innovations, degrades to empire and the Roman endgame, and after a century of Greek tragedy as the highest poetry loses the genre and ends up with the Roman games. The 'decline' becomes really serious decline in the fall of Rome and we have a middle ages (a term we now understand) that goes on and on, and then one and on, pretty much until the rise of the modern transition after 1500. There is the Renaissance but we suspect that is something different. Through that seemingly endless period the eonic modulator was stone silent. No further help, nothing, silence. This was originally confused with divinity, and the idea of prayer arose. It is completely off the mark here. Once it reached system shutdown that was it. No one to beg for mercy, pray to or worship. Silence even as an entire age period foundered and entered medievalism. But a religion did emerge just at the tipping point to decline.

We can proceed to our model, confident we already see its basic point. And the model actually becomes a kind of database. In fact, we have included one in a further appendix: our model is a Table of Contents, an outline, an in-place demo of a dynamic, a bibliography growing by leaps and bounds, This is a model in search of its dynamics which by a process of elimination we have thrown into that brown paper bag we call 'evolution'. The evolutionary interpretation is apt, for Civilization. Note that civilizations don't evolve, but they may have transitions inside them and these create fields of diffusion that 'evolve' the whole. The result is a global Civilization, or oikoumene, still stuck perhaps in its cultural nationalisms, but rapidly integrating.

CONCEPTS OF THE MODEL

The data aspect is deep and stands as a challenge to our somewhat superficial 'air plane' view. A model should illustrate some dynamic. Our does so indirectly and uncovers a process completely unknown to us, but coming into view for the first time, as evolutionary. A kind of suspense emerges from our first perception of the 'eonic effect'. and just as Kant suspected, the data for this discovery lay in the future, which is our 'now'; we have only within the last century crossed the threshold

The Axial Age parallel transitions

The stream and sequence histories of five parallel zones across Eurasia, and then a series of transitions inside them is almost unbelievably complex, but in each case evidence of a transition stands out in the period ca. 900 BCE to 600 BCE.

Greece/Rome: We can take the Roman case as either an independent parallel or as reacting to the Greek diffusion field stretching around the meditarranean. We have seen this clearest case already: the Greek Archaic. Note that the classical period to 400 BCE is 'free action' but under high octane and a picture of what man can do. By 400 BCE it seems over.

Israel/Persia: We forget the deep influence of Zoroastrianism on the double birth of monotheism. The Old Testament is in part a Persian hybrid with a Canaanite base. The blend of Indo-European and Semitic sources at the dawn of monotheism is breathtaking. Our 'macro' operator does something smart here. The 'Israelites' were stunned by the way 'history' seemed to subject them to conquest in order to complete monotheistic emergence...But Zoroastrianism was factored out of the Old Testament.

India: the case of India resembles the Israelite: its prime focus is on the generation of religious innovations. The stream history of India is very complex and carries from the Neolithic. Its transformation in the transition produces the Upanishads, a new version of Janism, and the classic Buddhism straddling the divide. To amateur and specialist both, this case is baffling, but the precise appearance of 'buddhism' in parallel timing with the Israelite is a good giveaway.

China: The transition that produces Confucius and Taoism remains hard to fathom but the result is a kind of special case of stream and sequence effects, but the passage beyond the Shang is clear. The surface data is a giveaway, the transition a complex blend of the stream from the Shang period...

The Greek case is really about a set of city-states, the 'polis' in a network of complex entities. Our eonic macro thrives on this, but also has a particular focus on Athens. This city state process seems true in each case, more or less, including ancient Sumer.

We need to study similar networks or phenomena in the other cases. The case of 'Israel' (in quotation marks) is really about Israel/Judah in a mysterious drama of the disappearance of two kingdoms. This spawns the transnational effect of a gestating 'world religion'. Each case is different.

of sufficient data to detect this mysterious dynamism that operates over millennia on the surface of the planet. Our bird's eye view is about to explode into an immense data set of hundreds, then thousands, then tens of thousands of books. Our model is a kind of lifeboat in a flood.

Passing from the eonic effect to a model is useful, but not necessary to the discussion beyond a few simple ideas. The core idea is that of 'transitions, our cluster of 'hotspots'. A model can help to discipline thinking, and organize our data. Once we 'see' the eonic effect we are likely to go wild with exotic interpretations, it is a provocative but elusive phenomenon. The magpie of theism lurks, and the sense of 'conscious' action emerges in the way the 'system' appears to act at a higher level than the complex social output induced in transitions.

It is not surprising we might feel this way: the 'eonic generation' seems to stand beyond the highest manifestations of human culture as an objective observer, de facto: that means it is correlated with the creation of the Iliad and Odyssey, Greek Tragedy, Greek Democracy, and a hundred other innovations and that it must be at a higher level therefore than all the above, plus. And yet the systematics seems at points little more than a feedback device. Correlation is not causation, but what correlations! And a mystery question emerges, is this phenomenon teleological? The problem is only that a 'science' of history would differ from the science of physics, and will have just the unexpected aspects we have already found.

The ancient Israelites noted the phenomenon in a limited context and felt a theistic interpretation was the only answer. Let us note their reluctance to use the term 'god' but they used a glyph in its place. Note the point, given centuries of gibberish with the term 'god'. We must suspect that the outcome as pop religion was in the background some very insightful observations by men who saw beyond 'god' superstitions. They could not see the phenomenon as a whole or any precision, and the first 'monotheists' were reluctant to use a term for good explicitly.

The correct category is evolution, by default, but that is not a theory but an empirical description. Things evolve over regions under a form factor in short intervals and/or sequences of such. Once seen that answer is obvious to a degree that leaves one to wonder at the confusion over random evolution.

> World history shows three broad turning points among many, the rise of higher civilization, the so-called Axial Age, and the rise of the modern. In the cases we can see these turning points cluster change and thus are the transitions. We think of a metaphor, stream and sequence; the stream is history, the sequence that of the transitions. We think in

> terms of the 'stream' of history and the transitions embedded in that stream. As history flows downward the transition drive it upward, so to speak. These transitions are eerie in their strangeness. They operate on two levels, the higher 'macro' aspect is the overall transition, the 'micro' aspect is the individual, or 'free agent' who creates history, and the transitions. This distinction of system action and the free agent is crucial and while 'man makes himself' in the classic phrase, there is hidden driver that guides that realization.

Our subject is history emerging from evolution in the emergence of free agents. The stream of history is moving, perhaps downward, while something is moving upward, via a set of transitions. The sequence of transitions, or their pattern in time, is the 'eonic sequence'. Repeatedly we see that these transitions, about three centuries in duration, induce innovations that transform later history and leave behind new civilizations. This happens as free agents experience the effect of the transitions as creative energy in some way. This means that man's consciousness changes during the transitions to a higher creative state. But we should think in terms of Civilization, as the outcome of (cultural) globalization. Our transitions generate diffusion fields and these produce development in larger and larger regions. The transitions follow a 'frontier effect' and often start from a region near their previous action. Our transitions are short acting and therefore stop at some point: we call this the divide for the transition. The eonic effect is visible with the rise of higher civilization but we can infer that we see half of the effect with begins with the dawn of the Neolithic. The effect accelerates the process of developmental civilization.

> We have seen that as we close in on world history we discover a mysterious process 'directing' its development, and seeding and amplifying the evolution of civilizations. It is not the civilizations that are evolving, but selected subsets called transitions that generate larger and larger, finally, global oikoumenes. It is thus not an inner process of civilizations, but a process at some independent level acting in its own time, like a drumbeat. This will make us distinguish two levels, macro and micro. The process is generating Civilization, beyond the ad hoc 'civilizations'.

We call this the 'eonic effect': our non-random pattern of three structured turning points with a complex of synchronous parallels set it in the context of a universal history and an evolutionary driver operating on a planetary surface. This is a hard nut to crack: no other dynamical process like this is known to us, but with a series of hunches we can more or less guess what

is going on. But what stands behind it is another question. The potential for metaphysical hallucination is high, and we must diagnose the pitfalls in advance, from 'it is alive', 'it is conscious', to the feeling reserved by the Israelites that any kind of 'something' that can operate over long times and wide spaces should not be spoken of, but pointed to with a glyph like IHVH. It was a noble thought, but monotheism became semantic ruin. The view of science is to some kind of mechanics. It must hypermechanics indeed, in this case, that would be cosmology. We should wager, some kind of fine tuning argument. And something we will put into the 'evolution' box. It makes good sense to say 'civilizations' evolve, or are evolved via transitions. But as we zoom in the details are tricky.

But we get lucky: a process that stretches into the far past reaches our present, and as consider our greater present we see that modernity itself in its gestation will give us insight into the whole of world history, and, indeed, to history still evolution, before that. We will develop a simple model for the phenomenon in question. It resembles 'punctuated equilibrium', which is in fact little more than a concept of a 'principle of sufficient reason', a cause for everything, but like a steam engine, if you wish a motor for history, in a four-cycle: ompah, two, three four, ompah...Such statements merely indicate that everything always looks familiar somehow, but at the level of tens of millennia, the engine concepts seems to work, but...the result looks alive, conscious, but in our case not grounds for a cargo cult.

> The modern divide Our transitions make sense as three centuries in length and ending with a divide. The modern divide is utterly spectacular.

Note also the Frontier Effect The modern transition jumps to Western Eurasia and then seeds a whole set of transitions ares just at the boundary of the Old Roman Empire: Germany, Holland, England, France, Spain (and Northern Italy in a related sense). There is no Eurocentrism here: the modern transition will rapidly globalize and we can see already a new global community. Our transition areas repeatedly entangle with imperialism, and it all case the diffusion effect is effected, while the transition areas suffers its 'karmic' downfall and passes into history: Spain/Portugal, France, Holland, England, Germany, as they curl around the old boundary of the Roman empire.

Note that imperialism starts as diffusion and then becomes corrupted: the eonic system cannot control its futures, but never seeds imperialism.

Imperialism is latent as free agency, but always goes haywire and falls away. We can see the effect in some cases: the English imperialism in India produced an overall negative empire effect but a close look shows many were rapidly assimilating to the new diffusion field of the modern transition and felt grateful for the result, as they chased out their imperialists.

This is a classic case where the issue of 'intelligent design' lurks as a rival to our dynamical argument. The debate over design has gone on ad infinitum, but we are not going to be confused here by sophistries on both sides. Our 'intelligent designer', if real, is some kind of planetary software, and is so slick we never catch 'it' in the act. But its indirect action can reorient a civilization, induce creative art, understand at a higher level its own inductions of multiple categories from religion to philosophy and science. Most of all is associated with seeding democracy, as we will note. And yet with all of that it betrays a curiously mechanical character. The idea of creating a cargo cult here is on hold.

The eerie and sudden appearance of this phenomenon in fine-grain at the centuries given at the end of a preface of the evolutionary record at the level of millions of year is almost unnerving: we may have missed entirely the mechanism of evolution. Our definition of evolution, in one way, is so trivial as to be not worth debating: a container for data of developmental change, a brown paper bag for that data. To be sure, the earlier evolution of organisms and that of civilization are two different things. But we will see that the two must be connected.

> The connection can be seen as follows: history emerges out of evolution in overlap as animal forms show increasing agency, consciousness, and finally 'will': clearly the two processes are Janus-faced. Agents create a record of action, or history, and the primordial proto-history is with first animals and the way their biographies 'make history'. The is a Great Transition from evolution to history. We will develop this further to see that there is no instant passage from evolution to here but that it must test itself in multiple replicas of the above as mini-transitions inside the Great Transition.

Everything seems to evolve slowly. Suddenly at the very end we see the action of a mysterious evolutionary driver. A sinking feeling arises, what are we missing? Evolutionary change may happen so fast that we don't detect it and assume evolution is slow, not fast. Our perceptions of early eras is so coarse-grained that we see very little. Debates over slow versus

fast evolution are confusing us: our data shows in world history how rapid evolution can happen, being wary of the term evolution in two related but different contexts. But history and evolution overlap, so insights into one may well tell us a lot about the other. This said, we know almost nothing about the earlier evolution of organisms.

We have put the result in the context of a descriptive model, 'informal systems analysis'. The concepts in the terminology are intuitive and can be understood at once. The question of a science of history remains in the future, but we can see this phenomenon would enter such a discussion which shows simplicity in immense complexity, and something different from causal logic. A science of history based on standard causality, biochemical processes, and reductionist methods is not going to work. The causal becomes the 'transition'. We can retreat to the classic idea of a 'principle of sufficient reason', i.e. some brand of explanation. The issue of free agency, which may or may not be free will, enters to complicate causal explanation. However, you may speak of the 'causality of freedom', but you will short-circuit ordinary logic and parachute into 'Kant land' which is at points a bit like 'Escher land. But the idea is not mystical. Kant's antimonies have been long studied. If you give someone a sum of money, you 'cause' an increased freedom of action, to spend , so to speak. If people play at a sport, they are free agents, but constrained by a set of rules.

> We will start to introduce the terminology of our model, starting with 'evolution'. We use what we call a 'formalism' of evolution with a distinction of macro and micro....The eonic effect shows clearly why this distinction is necessary and was present at the start in the work of Lamarck who introduced two level evolution. We will call 'evolution + history' for man the Great Transition. The result is an empirical map, and not a 'theory'. We are so used to a 'theory' of evolution that an empirical map of evolution is at first disconcerting. But it is actually the best approach.

The effect unnervingly is suddenly visible, in part, after the invention of writing in Sumer and Egypt just before 3000 BCE and the bare minimum interval of ca. five thousand years that itself occurs in a period of what we call transitions (5000 years is two eonic intervals and the start of a third).

A study of Archaic Greece will show the effect: a massive dose of creative action, followed centuries later by the great decline we see, the tale of Gibbon, etc..A synchronous parallel effect is visible across Eurasia: beside Greece we see the same effect in Israel, Persia, India and China. Each case is unique and the action is not a similar effect from a similar cause, but an

action adapted to each zone: for example, in the period in question (ca. 900 to 600 BCE) we see two religions emerge to become classic 'world religions': the monotheistic brand, and the atheist Buddhism. In China we see Taoism, and Confucianism. In the Middle East we see Persian Zoroastrianism blended with Israelite proto-monotheism or Yahwehism. In Greece we see an immense set of innovations, in a 'proto-secular' mode at its birth. This differentiation of effects shows we are dealing with some very complex, and able to scan the Eurasian field and particular cultures. The first phase of this is 2400 years earlier in Sumer and (soon to be) Dynastic Egypt.

We extrapolate that the explosive rise of modernity, so-called, from the sixteenth to the eighteenth century is one of the 'transitions'. It has nothing to do with 'Europe' as such but clustered in a 'frontier effect', a key concept in our model.

> Look at the Axial Age: you might think the eonic series would return to Egypt or the Sumer area in the next step, but it doesn't. Instead it 'acorns' top an adjacent area (usually) or else to some untried area. Instead of Egypt or Mesopotamia the eonic series moves to the Canaanite area and stages an adjacent transition that will do something different: create a religious form that innovates a cultural integrator religion based on monotheism as a reform of polytheism. This is a the classic case of the 'frontier effect'. In India an analogous process will generate Buddhism. Note that we see an 'atheist' and a 'theist' religion emerge in parallel with uncanny synchronicity. The same is true of the transition we see in Archaic/Classical Greece.

The modern world echoes the transition in Greece, and many phenomena that barely survived the long era of decline are 're-amped' in the modern transition: an example is modern science, born in Greece, seemingly fading away in the 'middle period', and then jump started all over again in the modern transition. There are many such re-amps, and the continuity of many processes seems the result of successive action: we call the sequence of transitions the 'eonic sequence'.

Suddenly we are in a situation where decades matter: many effects are in the short term. We are left to wonder what we are missing in deep time as we lose the fine grain in the span of millions of years. To be sure, the situations are not exactly analogous, but the point is that slow and fast evolution are mixed together in a way that makes slow evolution visible, and fast evolution invisible. We are in presence of an evolutionary dynamic, but it is only partially visible. The analog of 'punctuated equilibrium' might be useful, wary however of its misused semantics. The term 'punctuated

equilibrium' means little more than a 'principle of sufficient reason', what makes what happen? Something acting suddenly, and punctuating a point in history. But the sudden punctuations of the eonic effect are stunning in their action.

Note that the effects we see depend on the invention of writing, which occurs in one of the transitions, Egypt and Sumer. We suspect such transitions in the Neolithic, but they had no writing and no records exist. Just at the tail end of a complex series we suddenly get a glimpse of what is going on.

> We should note that the invention of writing is itself the type of innovation or 'eonic emergent' and occurs in our first visible transition! We must consider whether the invention of writing occurs in Sumer an then diffuses to Egypt or whether it occurs independently in concert.

Consider the effect here of writing: before we saw vast intervals with no fine grain, with writing, records start to accumulate and we see for the first time evidence at the level of centuries, and soon, decades.

For example, what do we know about the years 40, 000 BC to 39,990, a mere ten years? Nothing. What do we know about the years 480 to 470 BCE? We actually have records, and historians, for the first time, e.g. Herodotus, and soon Thucydides recording the Peloponesian war. We know something about Greek history at the decades level, sort of...Note that history in our modern sense is an eonic emergent of the early Greek period. We seem to have special periods of clustered innovations, the key to the eonic effect. The 'invention' of history has a dramatic moment here. In fact the invention of history begins with oral records in the Neolithic (or Paleolithic), and, e.g. the Dynastic records in Egypt...

> The idea of evolution is controversial and not necessary to depict the eonic effect, but we need the idea to grasp the way 'history' emerges from 'evolution' in a series of transitions in the 'evolution of freedom' (speaking formally), i.e. the increasing free agency of 'animals'....We might say that history overlaps with and emerges from evolution as the 'animal' begins to show increasing degrees of freedom. This provokes the endgame question of 'free will' and its visible aspect as choice or free agency. But human will is still almost embryonic and the psychology of the animal and then man as 'some sort of animal' with conscious free agency is very complex and not common knowledge without some kind of 'meditation' on behavior. Note that the term 'consciousness' is not understood in depth by man despite the way 'evolution' has greatly increased his conscious states, and this far predates civilization. We are left to wonder if the emergence of man as a species (or two in succession with homo erectus) is a primordial version timed in an eonic effect of

> its own. We call the whole process the 'Great Transition', with periods when the active evolutionary dynamic is latent, e.g. the Paleolithic where we see man in an 'equilibrium' interval where he begins to act out his potential. We suspect the renewed action begins in the early Neolithic or before (e.g. the Natufian).

Our subject seems to begin we suspect with the Neolithic, but as noted we don't have sufficient data as yet, and no written records. We seem to have the following chronology, a sudden and utterly simple intimation of the 'eonic effect' as a series of turning points or especially dynamic periods inside three broad intervals of world history.

the era of Sumer and Egypt...after ca. 3000 BCE
The classical era...after ca. 600 BCE
the modern era after ca. 1800 BCE

This periodization, still too vague, which we saw in the Preface, utterly simple and innocent of theory, hides the key to history and arises with the discovery of civilizations prior to proximate antiquity as the data for sequentiality crosses the threshold of a three term sequence.

> Our turning points are really a series of 'transitions' and conceal a hidden dynamic and demonstrate a sequence inside the stream of history. Transitions generate diffusion fields, and new layers of civilization. They are characterized by emergent phenomena.

> We must distinguish stream and sequence: the stream of Greek history is not the same as the embedded sequence seen.

This bird's eye view turns out to be far more exact then we could have expected and betrays that dream property of systems analysis: an invariant frequency pattern, but still only a three term sequence, just enough to see sequence. The sequence clocks at 2400 hundred years. But in a three term sequence that cannot be certain. A closer look shows increasingly complex detail that stands beyond chance as relevant to the analysis.

Our data for a three term sequence crossed the threshold of threeness in the last century and hints at an extension, still insufficiently documented.

> This is really two and a portion of a third: we see two full intervals or 'epochs' and the start of a third: the modern age, and we are immersed in the third incomplete era, but just outside of its transition (which we will roughly demarcate as 1500 to 1800, with the latter a rough marker for what we call the 'divide'. We have an immense treasure lode in the modern transition: a fully documented transition for the first time.

Three is not enough for a full proof of the non-random, but if associated

data, such as the interior data of the transitions, we confront a fragment of history, like a subset of a puzzle, but we can learn a lot from fragments and this one is truly a provocative mother lode of historical meaning. In reality the evidence for a sequence of epochs starting in the Neolithic or before and driving the rise of 'civilization' lurks on the threshold of hard proof. For those who pursue falsification, and haven't given up, we can try to 'predict' this extension, given a future archaeology. In part it is the interior data that really gives the proof. The problem for skeptics is that world history suddenly makes sense with this approach.

> The transitions take up a small part of an epoch at its start and we must distinguish free agency in two cases: system action and its effect on free agents, and after that free agency alone (as it realizes the innovations in the transition). We adopt a stylized account of the 'consciousness' of the free agents in a creative state.

This sequence, the stuff now of many a Table of Contents of world history texts conceals a subtle set of factors and can be given a simple 'glove' model (which is not a theory, as yet). The first is that our systems analysis finds a frequency pattern of 2400 years, a most remarkable fact save only that we must wonder if its starts much earlier. But the core evidence is the presence of 'transitions' at the start of each interval. This is true in every case we can see, and rapidly increases the odds in our favor. Our falsification option predicts transitions ca. 5500 and 8000 BCE and quite possibly before that.

As we examine more closely we can see that this frequency pattern shows a driven sequence, and that a series of transitions around three centuries in length come at the beginning of these intervals. We exclaim about Classical Greece, but we may not see the period from 900 BCE to ca. 600 BCE as Greece transforms itself fundamentally in the period corresponding to what is called Archaic Greece. This will need more discussion later. Many scholars have puzzled over the sudden explosion: from *World History and the Eonic Effect,*

> The unexpected suddenness of the Greek transition is remarkable. In The Origins of Greek Civilization, a study of Archaic Greece, C. G. Starr describes the inexplicable and truly extraordinary period of the Greek Archaic and is driven to feel that the common historical view on this matter [of the tempo of historical change] is faulty. It is time we gave over interpreting human development as a slow evolution of Darwinian type; great changes often occur in veritable jumps.

> As Starr, in a further book on this period, notes at the beginning of *The Economic and Social Growth of Early Greece: 800-500 B.C.*, the

> Greeks in -800 lived in small rural villages on the Aegean, "three hundred years later Greek life was framed in a complex economic structure embracing much of the Mediterranean and centered in cities which were socially differentiated", creating the foundation of the great classical period.

As we wonder at the flowering of Classical Greece we are drawn to see its sources in the Archaic period. Our model is a glove model that fits loosely over the data: we call the period from 900 BCE to 600 a 'transition' which straddles the so-called Archaic period. Why the two dates, 600/400?

Later we will discuss the divide of a transition, at the end: 600 is the divide, i.e. the end of the three century transition. The next two centuries show an immense flowering for two centuries, the Classical period.

> We can see the exact same effect in modern times: and our current moment is analogous to that of 400 BCE, which is very ominous, because it was all downhill from there.

To begin, the reader need not worry about the interval length, but the difference is like the germination of a seed and the point at which the plant breaks through to the ground. The innovations of this period and its immediate succession is truly spectacular: almost everything we take as basic in our culture first appears in this transition and its immediate succession. We should note how fast the whole situation loses energy and moves into decline.

In the middle East, the phenomenon directly in synchronous parallel shows 'Israel' or 'Israel/Judah' produce a new cultural religion and a set of texts between after 900 BCE and the mysterious moment of the Exile ca. 600 BCE. In Sumer and Egypt the three centuries before 3000 BCE show a stunningly innovative relative beginning in Sumer and the birth of the Dynastic format of Egypt and its Pharaohs. Finally the modern era is almost a cinch: suddenly after 1500 a series of regions in the European sphere suddenly take off into an explosive development that by the nineteenth century show us a new era in world history. The modern case expands and we see a network of cultural 'nations' all clustered around the boundary of the old frontier of Rome: Germany, Holland, England, France, Spain, in a strange variant case, Northern Italy. Each switches on during the transition and makes its contribution...

These statements for conventional historians invoke so many potential controversies that we would seem hard-pressed to make our case. But in reality we increasingly hold the upper hand: evidence however we can see

contained in dozens of historical texts. Ordinary history is a jumble of confusion, not worth the defense historians give it. The eonic effect shows an effect and coherent unification of the study of world history. As we zoom in and give these statements their empirical ground the result stands out like the sudden recognition of a small portion of a puzzle, and that sudden perception doesn't even require the whole puzzle. Indeed we suspect that we have only a part of the puzzle.

Note that the two transitions in early Greece and Israel/Judah are directly synchronous! It is almost like clockwork (along with all the rest). Thus, the second aspect can be seen by asking why Greece, the Middle East, India and China show synchronicity in the centuries around 600 BCE. Study Archaic to Classical Greece and then the saga of the Old Testament's account of Israel/Judah up to the period of the Exile. Two flowerings occur in parallel. Almost uncanny. We are at the threshold of a phenomenon that began to be discovered in the nineteenth century and then codified by a philosopher called Karl Jaspers. who described what he called the Axial Age from, to use his dates, 800 BCE to 200 BCE:

From his *The Origin and Goal of History*, we have Karl Jaspers' observation:

> The most extraordinary events are concentrated in this period. Confucius and Lao-tse were living in China, all the schools of Chinese philosophy came into being, including those of Mo-ti, Chuang-tse, Lieh-tsu and a host of others; India produced the Upanishads and Buddha and, like China, ran the whole gamut of philosophical possibilities down to skepticism, to materialism, sophism and nihilism; in Iran Zarathustra taught a challenging view of the world as a struggle between good and evil; in Palestine the prophets made their appearance, from Elijah, by way of Isaiah and Jeremiah to Deutero-Isaiah; Greece witnessed the appearance of Homer, of the Philosophers—Parmenides, Heraclitus and Plato—of the tragedians, Thucydides and Archimedes. Everything implied by these names developed during these few centuries almost simultaneously in China, India, and the West, without any one of these regions knowing of the others.

The scholars who stumbled on this phenomenon were hard-pressed to make sense of it and Jaspers' account missed the correct interval perhaps: 200 BCE is far too late and what Jaspers is describing is long over by that date. But we should note our idea of a transition seems too short: the Classical period seems to come after the transition.

> Transitions and divides Our model points to the end point of these transitions, they are ver subtle yet key to what is happening. Classical Greece, our example, has a divide at 600 BCE after which we see the Classical period.The gestation period is thus prior to this. If the purpose of transitions is to produce take off then the classical period is a first flowering in the immediate wake of the transition. But note how rapidly the situation passes into decline.
>
> Transition and oikoumene Each transition creates a new diffusion field and this is a new layer of de facto civilization on top of the prior. The Alexandrian world is one instance. The European zone of the Roman Empire another.

The Greek, Israelite and Indic transitions are very different, yet show a deep similarity. The Israelite and the Indic transform religion, and the Indic period is inconsistent in its action: it shows a re-transformation, e.g. the Upanishads, of the 'Hindu' and Jain streams which are very ancient and then just at the divide spawns a new world religion, Buddhism (in exact parallel timing with the Israelite phenomenon).

The Mayan phenomenon leaves us amazed: it is an exact exemplar of an Axial Age transition, but we are unsure as to its place overall, since its character is slightly different (hardly surprising, however). We must be wary of its distinct character, and not jump to conclusions.

The Greek transition is not the same as the Classical flowering which last two centuries after the divide. But as we proceed this will become clear: the gestation period of the transition is less spectacular. The case of Israel/Judah makes the point: the transition is clearly over by 600 BCE but the next two centuries show the consolidation of the material developed and soon we have the first versions of a 'Bible' or Old Testament.

> Let us note the ominous two century flowering after the modern divide, and the sudden sense of decline at just this secondary limit: will modern civilization go into decline as in antiquity?

There is a problem with Jaspers' account: it is focused on individuals but as we zoom in to study this phenomenon we begin to see these remarkable individuals are the 'icing' on the cake: the overall phenomenon shows a complex social transformation. That is completely natural and shows that the emergence of remarkable individuals has a cultural background.

We thus confront two clearly related but seemingly opposite phenomena: a sequential and a parallel set of transitions. But the solution to that riddle will soon become clear, however much it seems to defy belief: what is the eonic effect doing? Taken to the long view it is driving the emergence of

civilizations and is doing this globally. To establish a global unity it cannot concentrate on a single region but must diversify to cover a whole global ground. We note the way the 'Axial Age', a term we should move to replace,. A strange something is clearly producing parallel injections almost equally spaced across Eurasia: Rome Greece the Middle East, India, China...

Something global is at work here although the realm of Africa seems left out. That is not the case at all and we need to consider that ancient Egypt touches base on the African continent and begins the process of its developing history. The Americas? We should consider again the odd synchrony of the Mayan (but not Aztec) phenomenon in our overall picture. We can see that total coverage is not needed: a series of hot spots will create centers of diffusion from which a new culture zone or civilization will emerge.

So what do we have: at the conclusion of the Neolithic a sequence of transitions move to create a global civilization with the case of modernity at the conclusion. Why do we see the 'Axial Age' parallels but only one transition in modern times. We will have a series of obvious explanations for that, but to start let us note in antiquity it is still possible to seed civilizations in parallel but by the period of modernity that seeming inconsistency would create collision: global integration requires a different tactic. The point is that the modern transition creates a single diffusion field globally and the job is done.

This may be still unclear but our overall result is clear however strange in what it is doing: a driver of civilizations or Civilization is seeding a set of transitional regions on the way to creating a global oikoumene, as we call it. In our time every zone on the whole planet is entering that entity, even as they preserve their local cultural flavor.

These findings, and there are more, at first defy belief. The issue of sequentiality is not at first obvious. The student may certainly challenge, refute or attempt to falsify any such partial generalization in a 'mere' three term series, but the evidence speaks for itself as we move in closer and discover interior design factors. Falsifying the pattern we will find is soon almost impossible, even if interpretations are open to question.

We would not indulge in such a discourse without the massive evidence for its foundation. Unfortunately we can't do a data dump on our brains, we must read books of history, a lot of them. The actual data for a sequence, three terms, the first of which is barely in focus, would seem inadequate to make point but it is the interior evidence that adds up here. Once we see the actual histories of the whole case the evidence mounts and the probability

of a speculative 'theory' falls away. In fact, we have not produce a theory, simply an empirical range of evidence from which we can now create a model.

We can conclude with the development of that model of our data. In fact we have introduced the key ideas already. The rest can be a series of notes at the end of this chapter. That model will take up an idea of 'evolution' with a critique finally of Darwinism. That creates confusion and we have introduced the idea of the eonic effect without mentioning evolution, but we can't avoid the subject forever because history and evolution are related ideas and we can derive an elegant version of the eonic effect from that connection: we can start with a simple question, history and evolution are connected since man emerges from evolution into history (which is what?) And we can ask an artificial question, when does evolution stop and history begin. Clearly there is no instantaneous switch between the two, so there must be some kind of overlap with a transition between them. But that is probably still too sudden so there could be a series of transitions each in a kind of hybrid of evolution and history. But what does that mean? There is a simple answer: the evolution of the 'animal' (leaving the case of plants alone for a moment) seems like the key theme of evolution and we note that animal shows the first signs of historical action: it is a organismic complex that shows an early form of free agency: it is unit in motion making some change in its 'biography' with the primitive early versions of free agency, bordering on choice, or so we suspect. So the transition from evolution actually occurs at the start with the emergence of the animal and its primordial early versions of 'free movement'. We have the main idea.

> **History and Evolution: deriving the 'transitions'** History, the human brand, emerges from evolution, in an overlap, in which a later version of that free agency starts to impinge on the reality of freedom in some sense, speaking at the borderline of metaphysics: science speaks of causality and ends up allergic to the idea of freedom. It is not surprising that the idea of the 'evolution of freedom' creates cognitive dissonance, but we can see taking the long view that the evolution of organisms in some science still unknown to us, demonstrates the evolution of freedom, if only as locomotion. The reality has to show somehow a grounding of that beyond metaphysics. Thus we see a series of transitions (successive species?) inside the Transition to man,
>
> A paradox confronts the distinction of evolution and history: when did evolution stop and history begin? This odd question is the clue to seeing that history and evolution must show an interconnection. Further this braiding together is likely to show a series of transitions between the two. With this clue we can rapidly find the evidence for

just this, which we call the 'eonic effect'.

We end with a very elegant depiction of the eonic effect: as man evolves into history, that history shows a series of transitions and we see these in actual fact archaeologically. There is more to say here but we will proceed to show how the idea of 'degrees of freedom' enters our picture. Isn't this different from the evolution of animals? It hardly matters because there is a deeper unity to the whole set of ideas.

We have a series of possible depictions:

man is still evolving, history hasn't started, and man is not yet free

man has left evolution and has entered history as a free agent

man is immersed in a series of transitions and is relatively free but still evolving freedom. We should note that freedom and free will are different discussions. A democratic system may not be a matter of free will. The rightness of this approach will become apparent as we zoom in on our transitions to see what they do: the seem to inject a series of innovations but a closer look shows that man does all the work. He finds himself innovating in the context of a larger evolution but his own free agency has to be basis for its realization. The point will be clear later. We have an overall system and the free action inside it. If some kind of creative energy suddenly enters that remains potential and the human agent must use his own free action to realize that. This hybrid situation is completely strange to human thought so far but there are clear analogues in life. The 'idea' of a novel has a set of defining elements (what is a novel?) but remains an abstraction. A human free agent takes the definition and carries out a realization of that.

The transitions are like that: a set of new possibilities end up being realized by man in history. We speak of system action, or evolution, and free action, or history. If you like 'free' in quotation marks. But the distinction is omnipresent in life and as with much here we understand the idea perfectly until we try to explain it at which point we become confused, the plight of the tale of the centipede in Aesop. If we drive a car the mechanism of the car is system action, in our parlance, while the actual driving is 'free action'. 'Free action' is the issue of choice and choice is not as such the same as free will. The debate over free will is one of the most chronic in the history of thought and while the idea lurks like paper money near talk of freedom we have not resolved the idea and have used the simpler idea of free agency, the basic apparatus of the animal in the relative freedom of locomotion.

Let us interject a key idea of our model: transitions are discrete intervals in a continuous stream: they are short bursts. And they therefore

> terminate. We call that point the 'divide' of the transition. It is a mysterious moment and will show us many things.

We have spoken of 'transitions', but we can see that human evolution is itself a transition and we can call the whole thing the Great Transition and this still includes moments of evolution. It is important to see that transitions are relative beginnings. A 'Monday' is a relative beginning in a series of weeks. This leads us to a new terminology, that of the Stream and the Sequence. The stream is easy: just the stream of history, like the flow of time. The transition is an example of a 'relative beginning' in the stream of given history, If we examine Greek history we see that its history goes back to the period of Indo-European migration or before and that the era of the Mycenaeans is a part of that stream. But that earlier history doesn't show evidence of the type of 'eonic effect' we see in the other cases, a point open to discussion, But there is hardly a comparison of archaic/Classical Greece and the Mycenaeans. The Greek transition simply pops out of nowhere in a radical discontinuity that has no prior sociological explanation. And that it occurs in parallel with other such apparitions and has no standard historical causality.

The idea of a stream versus a transition is crucial because over and over a sudden era of innovation occurs at the beginning of a new 'era' but not at the beginning of a given cultural history. If we examine the histories of Egypt we discover a long antecedent 'history of some kind' before era of era of pharaohs and pyramids: that is the stream. We noted the same for Greece. And this can clarity at once the strange history of 'Israel' in the Old testament: there is a long tale of the history of the peoples of Canaan and their interaction with the Egyptians and Mesopotamians. But we see by the near mythological character of those early books of the Bible and then the sudden account of the three or centuries before 600 BCE change their character.

They are close to historical accounts in the real sense and sure enough they recount the period of a transition, such as it is to those who saw what was happening and tried to account for it via theistic ideas.

> The Frontier Effect: the eonic sequence never touches the same spot twice: and transitions are frequently acorned in the adjacent vicinity of the prior step.

This brings us to the idea of the 'Frontier Effect'. It can also be called the 'acorn' effect. A great civilizational oikoume (sourcing in a transition) such as the Egyptian creates development in its sphere as if to seed a new

area with the sprawl of acorns and it is clear that the wild Canaanite world in the periods in question was a frontier zone relative to Egypt and post-Sumer (from which Abraham myth or man appeared. In most cases we see that our transitions show a frontier effect springing up in the field of a prior civilization. The case of 'Israel' is a classic case: it acorns in the diffusion field of Egypt and Mesopotamia and then during the next epoch suddenly shows a transitional effect. The same is true of Greece/Rome. What of the first in the series, Egypt and Sumer, but we would have to extend our discussion backward into the earlier centuries before to see if a frontier effect occurs. We must defer that discussion.

Finally we can see that the sequence of transitions in history is itself a Transition, part of the Great Transition, and we call that the 'Eonic Sequence' and the 'Eonic Evolution' of civilization. We have also introduced the idea of macro and micro evolution. The eonic sequence is the macroevolution while the microevolution is the historical realization of the macro sequence, free agents create microevolution.

We have almost finished a short exposition of what we call the 'eonic model' of the 'eonic effect', and while the result seems difficult at first the basic ideas are reasonable enough. There is much more here but a rough sense of the mystery at the core of world history is a start. The key issue here is that as we zoom in the field of circumstantial evidences increases to the point that something like our model has to be the case, whatever the infelicities of our account. In the end the evidence speaks for itself, whatever we make of it. And the idea of flat history, proceeding at random falls away as falsified.

The distinction of system action and free action is crucial: the transitions suddenly inject new factors into history and that happens via the sudden creativity of the agents in place who then execute the result via human action. World history suddenly clarifies with this distinction. The passage from classical Greece to the great decline of the fall of the Roman Empire shows the dread distinction of system and free agency.

The study of macro history navigates near a trap: teleologies mixed with histories of human failing, evil, and primitive barbarism. A close look shows we evade this problem, and that the macro sequence remains at a high level of potential. The many problems with ethical history are man's doing. Consider slavery: higher civilization starts without slavery in Sumer, but the process emerges in the wake of that as 'free action'. It is man who invents slavery and it is the macro effect that induces 'abolitionism' many millennia.

We need to learn the lesson here: man has nearly destroyed his own

civilizations. The eonic effect is always benign and creates potentials as 'creative energy'. The failings of free agency require careful scrutiny. This is a long discussion and must end with a warning about politicians and leaders who have fallen into the cult of Machiavelli. The eonic sequence produces a figure like Kant who is that rare figure, just near the divide, who takes on the world's politicians with an ethical argument, mostly disregarded. That's a mysterious tragicomic humor and a warning. The point here is to be wary of the facile judgments from incomplete knowledge. Free agency is fallible and may end up destroying civilization. We see that problem acutely in our own times. This planetary probably takes snapshot of all of its history, so an instant sermon creeps forth, watch your step, you be being watched.

This relates also to an idea we introduced but haven't discussed: the modulation of human consciousness as self-consciousness. This distinction is elusive and seemingly contradictory. Not every culture understands the distinction. There is a whole transition devoted to turning this issue into the core of a world religion: the religion of Buddhism whose core is the practice of meditation. Our own time shows the sudden appearance of the idea as the practice of mindfulness. We can call self-consciousness mindfulness consciousness to suggest that the term 'consciousness' always ends up turning into two things. In fact, the history here shows the postulation of four basic states in man: sleep, consciousness, self-consciousness, and a fourth unnamed beyond all these.

This raises the question of Hinduism in relation to Buddhism. We do not see the origin of Hinduism, nor do we have any adequate word for what it points to. It is a suspicion that the core ideas of Hinduism gestate in the Neolithic in a history lost to us. The 'transition' which induces Buddhism is actually a very complex mixture and 're-amps' via that transition the Hindu stream into an Upanishadic upgrade. The subject is confused by the debate over the question of the Indo-European or 'Aryan' invasion and the way that the later traditions show only a Sanskrit or Indo-European (e.g. Pali) version of the religious texts. But the hopeless confusion here resolves itself if we consider that the earliest Indic traditions precede the entry of the Indo-Europeans and preceded writing as oral traditions in some earlier non-Aryan language. The Indic transition in the Axial interval shows a complex triple effect that re-amps a stream legacy into the Upansishads, re-amps the Jain tradition in what we now call 'Jainism', and many strains into the great Buddhist 'restart' that produces a first world religions in parallel to monotheism. Thus, the whole Vedic wrapper used is a red-herring. The

Indo-Europeans picked up the indigenous traditions and put them into writing in the new language formats, e.g. Sanskrit, itself a peculiar product we suspect of the transitional era.

We will move to an appendix mode: as we zoom in more and more we precipitate a flood of new problems, discoveries, 'eonic effects', but these reinforce our 'air plane' view.

> Let us conclude and consider one super-subtlety: the issue of the induction of democracy: this seems to happen twice and in both cases just before a divide, ca. 600 BCE and ca. 1800 AD. The logic of democracy of that of freedom evolving, but a macro process that induces freedom will leave it a mechanical state. We note the 'macro' solution: seed democracy just before the divide as system action, and then the idea can realize as free agency just past the divide...We have to ask ourselves thus if it is a coincidence that democracy appears twice before or at the divide in two of our transitions. The figure of Solon is immensely significant.

We must also consider the issue of slavery: a close look that nothing in the macro sequence seeds slavery: it emerges slowly in a fringe way and then grows worse in the wake of Sumer. Associated with the modern transition is the rise of abolitionism. We need to study the way that human activity distorts its own history.

Let us note that once again Solon is unique in denouncing slavery, almost the only figure among the Greeks to do so, despite their experiment in democracy, so-called and the emergence of the idea of freedom. This requires more discussion in our notes.

We can see that two-level models are essential because the stream aspect and the macro aspect are different.

We conclude by putting our model through its paces:

> The emergence of civilization is we suspect an epilogue to the Great Transition, the evolution and emergence of man. This shows the pattern of successive transitions as the realization of that in a kind of Gaian or planetary effect of directional and parallel processes. This is the eonic evolution of civilization, on two levels, macro and micro.

NOTES AD INFINITUM AND 'EONIC EFFECTS'

We have tried to keep this account short and will move to a set of notes, ad infinitum. The reader needs to try and stay afloat as a rapidly expanding set of complications in the history re: the eonic effect begin as 'swamp the boat': stand back and take the rising flood of details in stride over time. Of all the things proposed as brain boosters, this one is the best. We will meander through, but with an organized database, model, and bibliography in the Appendices.

An issue arises in a crisis of data reaching flood tide: to what degree can we absorb enough data to say we 'see' the eonic effect?

We have stumbled into a vast subject that could take up dozens to thousands of books. But we can equally attempt brevity: a glimpse of the eonic effect, but one beyond the air plane view. Which is a glimpse of evolution, which we see now is a transformation over a region over an interval of time, with a mechanism spectrum partially invisible. The Darwinian idea of a mutation in a such a field not getting swamped and adding up to a change of species is ludicrous. But our subject is not as such organismic evolution in deep time, but our account nonetheless offers a few hints. However, we see that evolutionary action, in our sense, is incompletely observed, so far in terms of current science.

We can derive the eonic effect from the relation of history and evolution as that of history emerging from evolution : this cannot occur instantaneously but occurs in a series of transitions, realizing an 'evolution of freedom' in the interplay of system action, as macro-evolutiona and free agency as micro evolution, an elegant version of the idea of evolution applied to civilizations. This contrast must show a change of consciousness in action, and we can invoked the traditional or classic distinction of consciousness and self-consciousness, with a question mark about 'creative consciousness'. We see that Man makes himself, and yet in concert with a larger process at the planetary, perhaps cosmic level.

The sequence appears to begin the in the Neolithic or before in the Middle East or Levant and starts as a first nexus based on the emergence of agriculture. The diffusion of agriculture is rapid and global but the real creative factor of the transitions moves past Turkey and the Middle East to a new zone somewhere in northern Iraq. This second phase of the Neolithic is lost to us but we can see that many of the later categories of civilization

emerge here. The Neolithic becomes a global phenomenon very quickly but the associated high civilization is still in gestation.

The decisive passage takes place in two parallel zones in the period ca. 3000 BCE in Southern Iraq and Egypt, a clear frontier effect. Sumer is the basic driver of the first phase of higher civilization and then passes via its diffusion zone to multiple secondaries in Mesopotamia, the Middle East, and finally to India, China, Europe, Africa, and perhaps (a considerable debate) to the New World. In the same way Egypt creates a diffusion zone also to Africa, Europe, the Middle East, the Minoans, and the Mycenaeans, and a similar host of secondaries in Shang China, India, and the zone of Canaan that is in the overlap of the Egyptian and Sumerian diffusion zones (Sumer is soon replaced by its own secondaries in the Mesopotamian field). These secondaries are like pupils and will be crucial to the next phase. The centuries after the invention of writing start to become far more detailed and we the beginnings of real histories from now. The rest is almost obvious. The secondaries in the wake of Sumer and Dynastic Egypt: Shang China, some aspect of India (we must be wary to name them), perhaps the Harappan sphere analogous to the multiple secondaries in the Middle East, the Minoans, the Mycenaeans, and many others. In the sphere of 'Canaan' we have the remarkable secondary later named 'Israel' or then 'Israel/Judah' in the most transparent frontier effect in a double diffusion zone of Sumer and Egypt.

Then the next cycle begins, this time with a massive synchronous parallel effect in the so-called Axial Age: in China, in India, in Canaan/'Israel', in Greece (or Greece/Rome). We should also include the case of Persia which, however, is caught up too directly in the Mesopotamian world. Note the frontier effect and the way that the eonic sequence of transitions never repeats itself but seeds an adjacent area, or else an exterior area in the prior diffusion fields. The sudden thunderclap of transitions is especially dramatic in the case of 'Israel/Judah' and Archaic Greece. The diffusion field of the Greek transition spreads throughout the Mediterranean and we see that Rome is a direct outcome in that field, destined to inherit the vast cultural legacy coming into being. The remarkable case of Israel shows the gestation of a new religious literature and monotheism, then suddenly the fall of its kingdom and the Exile which in amazing fashion matches two monotheisms, and produces a blend of the two. The Zoroastrian Persians as if too caught up in the world of imperial politics pass their version of monotheism to the exiled Israelites who proceed to create a world with the novelty of monotheism as a reform of paganism, and an immense diffusion facilitator will spread in a very wide net that will finally overtake the occident. Note

the direct synchrony of the Indic Buddhism as it emerges in concert as an atheist religion with the theistic (monotheism) of the Israelite. Meanwhile the world of Archaic an classical Greece produces a spectacular foundation for future civilizations in parallel with the religious aspect of Persia/Israel.

Note the awesome beauty and terror of the eonic sequence as the Axial transitions switch off and we are left with the history of multiple civilizations operating with the legacies given in the Axial period. The result is seen in the Occident which never recovers its first creative moment and presents the drama of emerging world religion in the context of empire, then decline and fall. In the fixed frequency of the system action the system on its own can barely reach beyond the default degeneration of empire and finally the collapse of the whole nexus of civilization in the strange medieval period. There is a great deal of remarkable history here, but the larger slump is inexorable and does not lift until centuries later, in the sixteenth century in a spectacular frontier effect in the spaces distributed on the old boundaries, frontier, or edge spaces of the old Roman oikoumene: Germany, Holland, England, France, and Spain, with a paradoxical near Frontier Effect: northern Italy. It is a strange yet exact outcome in terms of our model. The frontier zone areas of the older Roman world are well prepared for the next take off or jump and in the three century sliding scale of our transitions the period and are the recipients of a remarkable blend of the Israelite/Christian and Greco-Roman diffusion fields, a rich blend of cultural substance and dough starter. The process too obviously begins with a religious revolution as the Reformation and this becomes a kind of envelope for the modern transition to the extent that it succeeds: the Reformation is an incomplete transformation but it soon passes far beyond itself and we are soon in the massive flood tide of modern innovations in science, philosophy, art, politics, religion, and economy. It is often claimed that modernity equates with capitalism, but that is misleading. Capitalism is a universal history of its own stretching back to the Neolithic. But it becomes amplified in many of the transitions: we should consider the obvious appearance to a close look of capitalism in ancient Greece (if only because of its historical documentation). The rise of modern capitalism is thus already present (with some strange yet very significant exemplars mixed with the Protestant Reformation) and yet under transformation as the climactic phase of the Industrial Revolution. The system suffers a tragedy in that in part due to Christianity it has come close to abolishing slavery, but suffers a relapse in the sudden expansion of worlds and the maleficent capitalist reamplification of slavery, in the

New World. It is hard to analyze correctly this complicated snafu, but it would seem that overall the Eurozone has achieved statistical abolition but as always with the eonic effect cannot control its fringe zones in a typical contrast of system action and free action. The overall system is thus going in two directions an even as the modern system of 'free labor' gestating with a mainline version of capitalism the deviation in the new world rapidly produces a malignant an retrograde slave system. But even as we diagnose this sudden pathology let us note to the long view the seeming improbability of abolition, the persistence of slavery, then, despite its deviation in the fringe zones, the mprobable eonic emergence of abolitionist thinking in concert with the mainline theme of freedom concepts, its sudden crystallization near the divide an then the awesome and prodigious drama of the American Civil War still close to the moment of the divide to a long view and the virtual sudden disappearance of slavery in the large, or aggregate: abolition achieved. That the result is equivocated with the phenomenon of racism is an important caveat, but the grotesque malformation of social slavery over millennia has finally been broken, and that in almost spooky fashion just down field from the modern divide.

That is a brief sketch of the 'eonic sequence' and once again we see the constellation of cultures in the wake of the divide confronting the 'mideonic' phase of the great modern transition. It remains to be seen what the outcome will be and we are now participants in the process and can begin to see our place in the developing global world.

Our account is open to challenge, attempted falsification and challenges to the model but the empirical basis is hard data and cannot so easily be explained away. That is why we pointed to a non-random pattern, a basic neutral claim.

The core of the model

The Great Transition: the evolution of man, but including world history

World history and its eonic effect leaves us to wonder if man is still evolving in historical times; but that has nothing to do with Darwinism. Evolution is more than genetic and the civilizational complex accompanies man's evolution in the same way that territory is always relevant to organismic evolution. The genetic effect due to emerging civilization is still an open question.

We have seen this before: anatomically modern man emerges but then a new phase appears as this is put into proto-historical motion.

The Gaian matrix the eonic effect shows sequential and parallel evolution:

a matrix on the planet surface

Our phenomenon is a planetary phenomenon, and we should explore a possible science here, of planets as cradles of life. Many confusions arise in terms of concepts 'alive' and 'conscious'. And these are applied beyond organisms to more general entities, e.g. to planets, the 'living earth', etc... At least, it is not yet science, but we should at least note that planets are the cradle of life: is there some category beyond 'dead mass' that stands in correct 'higher' potential to life since planets harbor life...

A formalism of 'evolution" as in the eonic evolution of civilization: also macro and micro evolution.

The distinction seems artificial in some ways but in our case is essential as the eonic effect generates macro evolution, while free agency generates micro evolution...But the micro effect might fail and leave decline in its wake. That is the 'evolving freedom' likely to be in practice.

The relation of 'history and evolution": We have seen the way 'history' overlaps yet emerges from evolution in the construction of the 'animal' over the immense span of time. In history we a series of transitions in which man enters the realization of some hidden component.

The idea of freedom and the 'evolution' of freedom

The evolution of freedom is metaphysical and unable to stand with normal science, but descriptively it is clear in our account.

Free action and system action

This distinction is crucial. We use it all the time in normal situations: a car shows system action, driving is free action

Stream and sequence, discrete-continuous distinction

The stream is simply historical time which is continuous while the sequence of transitions is a discrete series. The distinction is essential and it also helps to sort out the two types of history seen in practice: consider the Old Testament: it describes the whole history of the world since creation, mythologically to be sure, and this abuts on the tales of Abraham to Moses, whose tales are epic saga, with some possible factual basis. Then the period in the early first millennium shows a more factual account with the appearance of the prophetic literature, early versions of biblical saga, The almost peculiar tale of the politics of Israel and Judah make sense in terms of a larger process moving toward a universalist religion the movement beyond geographical place to a placeless conception. But the geographical Israel returns after the Exile as the Old Testament consolidates. The final disappearance of the place, Israel, in the Roman period seems despite its horrific character a clear concluding chapter in the tale.

Self-consciousness Any model of human evolution needs concepts that modulate the phenomenon of consciousness. Here no one seems to know what they are talking about since it is a case of state of consciousness depicting another. In much literature this is via a distinction of consciousness and self-consciousness, the latter being a distinction discovered over and

over, for instance in mindfulness exercises to puzzled participants unable to explain their different sudden consciousness. In addition we might consider something deeper: a creative state of consciousness. The transitions we see show the sudden expansion of 'genius', and we can formally that as creative self-consciousness in the context of the macro effect. Speculation.

The point here is that our transitions act directly on the consciousness of the free agent and it is almost obscure to say so, yet the point is on one level entirely obvious.

We should move rapidly to our conclusion warning the reader to perhaps skip some of the complexities introduced for the sake of making our case in its more difficult aspects, but which the reader steps into backwards as he explores the implication of a simple beginning.

System Action, Free Action The eonic model is at first tricky because it moves from historical causality to historical potential. Our transitions create a potential which is then realized by free agents. We can see the difference without much trouble by looking at the historical record.

Transitions and relative beginnings, the unit of analysis

We see that instead of some inner dynamic of 'civilizations' in the sense of Toynbee and Spengler, we have an external process that operates the space and time of a given civilization and its long stream. The Greek transition is unique and appears well after the onset of the stream history...The transitions are relative beginnings. We use the idea all the time: each Monday in a week is a relative beginning in a year.

Stream and sequence, discrete-continuous distinction

The eonic effect is a complex blend of continuous and discontinuous effects.

Transition and oikoumene, fields of diffusion

Each transitions starts a process of diffusion and this field creates a new form of civilization, often in layers one on top of another.

Transition and divides

The end of a transition creates a divide effect: this is especially noticeable in the modern case in the period around 1800 when a climax of effects finishes and leave a new cultural world in genesis as it expands to become a global oikoumene, for the first time.

We have already discussed:

Eonic emergents, creative incidents and effects inside the transitions

Sequential Dependency: a cultural trait inherited by diffusion

The Frontier effect, also the 'acorn' effect

Econostream (economic histories)

Technostream (histories of technology)

These two terms are hardly used but invented ad hoc to remind us that eonic history, economic history and technological histories are not the same. Man has started to master economic and technological histories, but is blind still to the eonic history

The Eonic Sequence: the sequence of transitions

Transitions and Oikoumenes: diffusion fields

The 'evolution' of civilization is driven by transitions which create oikoumenes that set up a field of diffusion that in turn creates a new civilization. These diffusion fields spawn chile civilizations which in some cases become transition areas later.

Over and over we see primary transition fields spawn secondaries that may or may not enter into the direct eonic sequence. The first phase of the eonic effect shows the primary field of Sumer and Dynastic Egypt with numerous secondaries in the diffusion field, from the realm of the Shang, the early Indic, the Minoan/Mycenaean, etc.. This is an immense field of study and a tricky one, and we can adjourn that to look at an ambiguous case

Design arguments: approaching science?

And we might examine the issues of design arguments. World history shows a hidden teleological driver behind the emergence of civilizations, and this operate in a discrete/continuous progression of epochs, the third just underway, our present. The evidence is strong, but indirect and short of full proof.

This series shows clear but less visible evidence of starting in the Neolithic as the onset of the Holocene. But this point may be challenged: if we cannot be specific about the end state of a given process we have no final way to claim teleology. This allows a prediction: backtrack 2400 years, twice and you find the Neolithic in two stages...?

Teleological systems need little more than the right mathematics. Some differential equations can work causality from the future???! An extra dimension makes the question easy.

Teleological goals are elusive. If you goal is X, you aim at X, but if you goal is to show qualitative something on the way to that goal, you don't need to complete the operation. The teleology is different. We need to consider this with the eonic effect since the 'driver' we sense seems at first to point to some 'end', but if the 'end' is autonomy, then the driver stops and leaves the 'end' to man, his free agency

We have stumbled into a vast subject that could take up dozens of books.

But we can equally attempt brevity: a glimpse of the eonic effect: world history shows directional teleology and parallel synchrony. The latest transition is the rise of the modern, with a divide ca. 1800. We are confronted with a dangerous future in which system action having become free action the field of civilizations goes into the kind of decline we see in antiquity.

We should introduce an ominous question.

Can free agency rise to the occasion of terminated system action?

It is a shock to see how much of human achievement occurs in the transients. Without the eonic effect human culture would have remained in the stage of the Paleolithic. Man has learned to become technologically innovative but is still not fully in control of economic histories. He remains blind to the eonic effect yet that factor is the source of virtually all the advances of civilization. This situation is changing, perhaps, but the mastery of the eonic sequence still eludes social control . But the modern period has still not fully realized its potential and we will see if some cultural realization of that will occur. This is like Faust with no Mephistopheles. Something is obviously missing in our account: the historical dynamic is purely phenomenal, but must have an unseen component.

Again,

World history exhibits a mysterious but remarkable non-random pattern showing both sequential and parallel and synchronous effects. The evidence my seem insufficient overall but the interior correlations are close to decisive. We see a system action in an apparently fixed frequency of epochs in some case with synchronous parallel transitions, especially the Axial Age, but the synchrony of Sumer and Dynastic Egypt is another such effect. In addition, synchronous action is stunningly obvious in the early modern transition as a frontier effect with respect to the prior Roman Empire's European boundaries in Germany, England, Holland, France, and Spain, and ambiguously northern Italy. (Northern Italy is a true mystery. It is seemingly inside the 'frontier' yet itself a kind frontier, with respect to the old Roman Empire. It is strangely both at the same time, and it is starting point of modern 'classical' music. The stupendous action in this mysterious synchrony is clearly explained by the frontier effect. But the case of Italy is strange and ambiguous. The reason is that Italy has a 'Renaissance' and this is not the same as the modern transition. This is confusing at first. But the Renaissance is not a transition. It is a different kind of phenomenon. Nothing in our model forbids 'free action' creating a creative period, it is in

fact to be hoped for in the end. A close look shows the decadent character of the Renaissance behind an immense flowering of the 'fine arts'. The balance of effects is missing. We see the obvious answer: the fine arts have entered 'free agency' and show a remarkable moment outside system action. In fact, the real effect of the modern transition on the fine arts comes later: again 'modern art', so-called is outside the transition, but close to it. An utterly new and unexpected form of the fine arts begins with Impressionism and its succession. The logic here is at first obscure, but we suddenly see that, as any 'modern' artist would exclaim, formal art reached a climax on its own, and reduced painting, for example, to an almost mechanized state. This is an extraordinary achievement, but still half creative half mechanical but a genuine factor as of our era of free agency. So the Picassos et al. rightly mutated into something completely different. They even looked down on the immense achievement of perspectival art and its immense exemplars they considered a history of dullness. This is an example of the tricky aspects of our model and takes some figuring out with a warning of the strange complications of our analysis. Note that classical music has not undergone this transition to free agency. Outside the modern transition it wilts at once, but the realm of atonal music, a radical caesura, is itself a curious enigma, but outside our discussion, for the nonce. But we the strange case of Italy and its hybrid inside/outside divide aspect and the straddling of modern 'classical' music from roughly Monteverdi to Verdi/Puccini, and then not much, with the enigma of atonal music one for the future. But it clearly tokens the end of the end of the modern transition with respect to music.

End of Eonic Sequence?

The above suspected extension and the general 'eonic sequence' leaves the question, has that sequence come to an end? The answer is unknown, but the suspicion must be that it is: it would be hard to go through a transition and be aware that is happening. As man begins to observe the effect it would surely dissolve. And our moment is the first in world history with enough data to detect a three term minimum sequence: the existence of records for three transitions, two intervals between them, and the onset of a third.

Theories versus chronologies

We have produced chronologies with the first inklings of a theory, but none as yet: we lack the full scope of the phenomenon and/or the necessary data. But the interior coherence speaks for itself. But even a fragment gives

us a 'glimpse' of evolution which

must operate over a selected region
inject creative process in relation to a form factor

We can see that a theory of evolution is still far off and that it must be the equivalent to a 'factory' that can provide generalized blueprints or patterns in potential.

Neolithic extension, and the Natufian

Our model suggests two earlier transitions in the intervals 5700 to 5400 and 8100 to 7800 BCE. A study of the Neolithic shows a very tantalizing premonition of this: an early and then a 'high' Neolithic. The frontier effect tells us where to look: north sumer shows the onset of early form of temple culture. The Natufian suggests something even earlier. The period ca. 8000 BCE suggests the birth of agriculture (possibly in multiple regions) in the Middle East, consolidating in a new type of village culture in the Levant and Turkey, moving to the larger sphere of the Middle East.

The Neolithic in the 'eonic sequence

We can see that the whole phenomenon includes the Neolithic because the model predicts the period ca. 5500 and 8000 BCE will show transitions if we backtrack using the frontier effect. Sure enough northern Iraq and the Natufian period in the Levant fit the pattern, but less clearly given the thin evidence. Let us introduce a short quote from WHEE which takes a suspicious look at the suspected larger eonic sequence.

> Our model is highly artificial but works so unreasonably well in the range provided that we are hot on the scent of a more general pattern.
>
> Transition 1 ?Mesolithic transitions
> Transition 2 ?Proximate start of Neolithic ca. -8000
> Transition 3 ?The Middle Neolithic interval ca. -5400
> Transition 4: The birth of civilization, interval before -3000
> Transition 5: The 'Axial' period, interval before -600
> Transition 6: The early modern, interval before 1800
>
> We are already suspicious of the period in the sixth millennium, and there is an already filling gap in our knowledge in the area to the north of Sumer in the Fertile Crescent, a frontier effect prediction. A highlands culture zone to the north of Sumer seems to flow outward into the Mesopotamian area, in a frontier effect, prior to the historical period. We nearly have a four beat sequence. (WHEE)

We should be wary here: the evidence is still insufficient, but our guesswork is more than plausible given what we know so far.

The birth of civilization? village, town, city

The concept of civilization is almost dubious: the first villages are an equal achievement. Planetary civilization originates in the Middle East, roughly equidistant from most zones of Eurasia, between ten to eight thousand years ago (we can however consider stepping backwards in 2400 year intervals, had we the evidence, to find incremental histories) and becomes the source of the visible sequence beginning in the first truly visible transitional pair in Sumer and Egypt. The latter create diffusion fields that we can use to study the rapid imitations across Eurasia in the middle period: Shang China, Indic, Minoan, Mycenaean, etc, and European secondaries in the diffusion field.

Secondaries versus transition zones

In the next epoch the secondaries China, India, Persia/Israel, and Greece/Rome, will experience the remarkable 'Axial' Age thunderclap of parallel transitions (the Mayan case is entirely analogous, but difficult to analyze). The secondaries are in the diffusion field of a transition and construct sectors in relation to the source: the examples are endless, e.g. Mycenaean, etc semi-civilizations in the wake of the eonic macro sequence.

African civilization

The African legacy is often considered somehow primitive but that is entirely false. The nineteenth century shows directly, the San and Pygmies apart, the spread of robust Neolithic civilization throughout the subcontinent under the forbidding climate of Africa, that was a harsh challenge even to nineteenth century explorers. The realm of the Neolithic is barely explored and has its own rich factors. The European sphere before it entered the diffusion field of the Roman Empire was just such a Neolithic field. The exact history here is not clear but some source in Western Africa seems to have generated a continental diffusion of Neolithic civilization throughout.

Macro and Micro

Debates over evolution can be forestalled by adopting the idea of a 'formalism' of evolution.

We adopt the formalism of evolution to describe our subject and that implies the distinction of macro and micro evolution. The large-scale eonic

sequence is macro evolution while the free action that realizes it is micro. The two connect as the macro process somehow injects a creative innovation into a transition zone. And that's a bit of a guess. But this is an elegant if first confusing distinction and it connects two opposites in a unity.

As an example we might consider that the idea of a novel enters culture and individuals begin as free agents to write novels realizing the abstraction, a 'novel'. The analogy isn't perfect but the point is the macro process seems to deal in abstractions as potential innovations and man realizes potentials in real time. The macro factor points to the whole field of innovations or transformations in a transition, and in the heated interval the creative energy involved seems to reach a peak.

From this explanation it is clear that we are dealing with a mystery we don't fully understand. History and evolution

We can repeat our derivation of the transition phenomenon by looking at the emergence of history from evolution in an overlap that expresses the evolution of freedom

Mayan Civilization

The instance of Mayan civilization is as fascinating as it is still obscure. Everything in the format of its history allows the possibility that it is a parallel long lost kin to the Axial Age synchronous transitions. But there is something anomalous here: the issue of human sacrifice emerges in a very retrograde cultural pattern, even as the Old World is moving rapidly beyond this. We are left with a set of puzzles like this with the Mayan case. The question of human sacrifice is poorly documented and preempts dealing with its appearances in any conclusive fashion.

Our model is very peculiar here, yet prodigiously acute. The point is that the evidence seems to point to a process of diffusion from the Old World to the New, the emergence of secondaries in the second millenniums BCE such as the Olmec, and then the sudden synchronous emergence of the Mayan civilization via a transition ca. plus/minus 600 BCE. This explanation is so completely in tune with our model that we are tempted to take it as given. And yet the fact remains that we are unsure here. Was there diffusion from the Old World to the New? This is a old dispute but we should note how many scholars have insisted on the point (but, to be sure, on both sides). Note the way our model is perhaps the only one that could deal with this perplexity for we are claiming two things most scholars would find hard

to accept: overland diffusion as a secondary, but synchronous trans-spatial induction in a transition. We must merely catalogue these possibilities and let the question simmer since we are in uncharted terrain. Frankly the opinion here is that this rough explanation is right and that only a model of the type we are using can deal with the complexity of both overland diffusion and synchronous trans-spatial injection.

Freedom effects: Solon, discrete freedom sequence

This refers to the way that 'democracy' appears twice in relation to the eonic effect and just as the divide point. This brings us to one the most elusive aspects of the eonic effect: the emergence of democracy. Consider Solon just before 600 BCE and the rise of democracy in the modern divide. There is a deep subtlety to this we can discuss later.

> This correlation suggests the rightness of 600 BCE as the divide in Archaic Greece and has its own low probability 'proof' of the model: induced freedom in not fully free and the birth of freedom, induced or not, ought to occur outside the transition. But a nudge might help. It is like the third wheel on a child's bike: the degree of freedom of the child is reduced, to learn, then the third wheel is removed and the child rides 'freely'.

The discrete freedom sequence raises the issue of ideology. But our model is not a theory and there is no reason we can't raise issues of ideology since the system action itself creates them. The concept of freedom is both dynamical and historically ideological. That is not wrong, but tricky. Immersed in the system our judgments can be fallible but in any case our free action creates history and the ideologies themselves are eonic effects. But this system has a mysterious ethical purity that never experiments with or induces evils. Since man's action are probably on record the notion of some kind of 'Last Judgement' in a secular definition rises from the field of dead concepts.

Diffusion fields versus synchronous emergence

We confront a tremendous and exciting enigma in the way diffusion, which is straightforward, with synchronous emergence, which looks almost miraculous and is never discussed by historians. But the Axial Age forces the issue: things happen so fast that they can't be the result of lateral diffusion. Further, they are distinct phenomena, but related at a higher level: Buddhism and 'Israelitism', soon a form of monotheism, emerge from the Axial period, and begin to crystallize in the two centuries after the divide. We must assume that a common 'cause' is producing related, analogous, and parallel effects,

in a synchronous time-frame that happens so fast they can't be the result of lateral diffusion. But the issue of diffusion is of great interest in its own right: consider way the modern transition produces a global oikoumene, it happens so fast that by the twentieth century a new global culture is an incipient *fait accompli*. The world has globalized before, but the diffusion field of the modern transition is unique in its own way, especially so with its signature of the Industrial Revolution spreading far and wide.

We have cited the synchronous emergence of Israelitism and Buddhism, but this key data set includes just this distinction of synchrony versus diffusion in the example of Zoroastrianism. The later already exists in some form with Zoroaster a little like Moses, an early founder in the stream, but whose work get a re-amp in the Axial Age transition interval. The details are not fully clear, but what we do see is amazing: history forces the issue of diffusion in the sense that Israelite monotheism, and Zoroastrian monotheism are forcibly so to speak brought into proximity and blend, creating the later 'Judaic' combination of elements that in turn will produce Christianity. And then Islam. But it is interesting that Islam is also, or really, a descendant, a very distant one of just the older Zoroastrianism in the sense that the complex history of the Persian world and religion centuries later confers some influence on Islam. Or so we strongly suspect. Its appearance in the diffusion fields of both is of course reasonably obvious.

There is an immense amount of work needed to track the fields of diffusion created by transitions and next to that the issue of diffusion as such. As we examine the Axial effects we seem to see instant synchrony across time and space: it happens so fast no diffusion could have occur. Again, in another example, two exceptions prove the rule or else both are true: the Roman realm is a clear instance of the diffusion field of the Greek transition and this happens within the time frame of the transition via simple geographical diffusion, i.e. the Greek city states in the South of Italy, for example...But there is something odd here: there seems to be an element of synchronous emergence in the Roman case. None of the other city-states in the Greek field do what Rome did, with its classic start up as a republic in the transitional era. It is no contradiction of our model to say that both can be true. Who knows, it is a tricky question. Whatever the case, Rome emerges as a massive construct of the Axial Age and goes on to create an enormous oikoumene. Again our model shows the truly intriguing example in the relationship, still insufficiently understood of the instant diffusion inside a transition between the Persians and the Israelites. And our transitional

incidents include the case where the receiver, the Israelites, are physically transported to the realm of the Persians during the exile, with the result that a hybrid, still not understood, of Canaanite and Persian 'monotheisms' is effected, which then is passed forward vis the world of the post-Exile Judaic legacy. In both cases we see polytheism reduced to monotheism (the pantheon of proto-Zoroastrianism is especially interesting. And it is important to note that Zoroaster, like Moses, far precedes the transition, and that the world of the 'transition era Persia' is too imperial for the role bequeathed to the 'Israelites' who suffer the stunningly mysterious loss of their 'kingdom' as monotheism gets a dose of universalism in its sudden placelessness),

In general issues of diffusion cannot be brought to the explanation and we confront the mystery of synchronous action defying space-time.

There is no diffusion we now of between Buddhism and monotheistic genesis, although a host of books claim otherwise, in terms of Hinduism: these are the Jesus in India studies, etc... But all that is later, the key period of ca. 900 to 600 BCE in Greece and Israel and India shows synchronous action, later diffusion does occur. The fact is that diffusion could never explain the complex Indic transition, almost incomprehensible given the data available, comprising a host of dialects so to speak. The uncanny clock work of emergent Judaic monotheism and Buddhist dharmic religions allows no explanation via diffusion.

And the case of Christianity is entirely different: Christianity is not part of the eonic effect and emerges much later in relation to the later history of the Roman world in a collision of emergent factors. This strangely puts the Judaic history in the realm of system action and Christianity in terms of free agency. This seems wrong.

It takes a lot of thought to see that perhaps this is works right as explanation, but something is missing. It is entirely possible that a more primitive entity can show system action which a more sophisticated successor can show only free agency.

The answer we suspect is that any number of 'spiritual powers' can enter the Christian explanation, if such exist. Such powers can have effects in time, but they can't mimic the eonic effect who scale is tremendous. That requires evidence and we have none since everything is smeared over with 'god explanation'. This example may be too complex for our model which deals wish ancient Israel/Judah and then stops. Let us note that we have very little data for the onset of Christianity although the top level surface explanation via the Gospels, however distorted, mythical or propagandized works fairly

well. A spiritual Jew in the direct legacy of the transition moves within the Roman milieu, whether as pure prophet of some kind, or a politicized Zealot in revolt against Rome. Such high level 'obvious' explanations might be our only path through the complicated and not truly recorded history. Many of the indications of Christianity show a direct unfolding of the potential in the Old Testament world as is proceeded from tribal cult to universal religion. At the same time it is clearly a case of 'free agency' in the many given details of its crystallization in the centuries after clock o year. Our model probably gives the right answer but suddenly it is tricky and we are left with something primitive at a higher level than something more sophisticated at a stepped down level and the end result is almost undecipherable. But the later world of Christianity was already in two diffusion worlds, the Judaic and the Hellenic.

There are many traps here and we can easily assume some spiritual power was behind the Israelite history, but our modern enforces right thinking: the process that is behind the Israelite transition would have to be the same for Greece, to China and this is far beyond any human reckoning, or any putative 'devangelic' (a neologism) power (which might well enter the Christian beginning).

Let us introduce another controversial idea to make sure we stick to our model and not spoil it by moving beyond its range into Christian explanations: the Axial Age as a subcomponent of the eonic effect is so vast it needs a different brand of discourse. It is not hard to find, or guess that that is: some kind of planetary or Gaian effect. Some operation at the level of planets (speculation) is at work and this is connected to cosmic evolution, or some fine-tuning aspect in the general context of evolution. We have put the eonic effect into the category of the evolutionary, and the genesis of man and this is different from the genesis of a world religion. This is why the Christians were always critical of yet confounded by the Israelite saga, and vice versa. And the later history of this process which seems to point to one universal religion but ended up with two shows an undecidable outcome of simple premises. It would seem that as the eonic emergent factors move beyond the transitions they become things unto themselves and as free agency can act with strange outcomes: the strange jackknifing of the Judaic legacy into two religions has been the object of endless recrimination and controversy, but the result is not open to our judgments using this model.

The issue then of some Indic influence by diffusion on the emergence of

Christianity is as possible within our model (which says nothing) but the same is most unlikely for the Judaic transition. The Christian saga explicitly pointed to three sages and it is entirely possible that diffusion enters here.

From Ancient to Modern

This pattern is very strange, but suddenly it is obvious what it is doing: a 'bouquet' effect that moves to include a spectrum of exemplars across a middle band of Eurasia. These areas then with their transitions generate larger oikoumenes which then diffuse into new cultural civilizations with neighboring descendants, a good way to develop the whole from a subset.

Note that the rate of movement at this period is still very low: multiple diffusion zones or civilizations can coexist without collision as independent, more or less, worlds unto themselves. China, India, the Middle East, and the occidental Greece/Rome: the latter case is obvious in the way, despite the rate of decline. It creates a new oikoumene via empire and conquest.

But in modern times that factor ceases to hold and we can see the way that the speed up of interconnection is such that multiple independent transitions would now backfire in the collision of effects. So in the modern case we see instead one transition area (with multiple cultural subsets along the frontier fringe), and the frontier effect jumps away from core Eurasia toward a barbarian zone that has nonetheless is solidly Neolithic but then becomes recipient of all the diffusion effects, first of Rome, then of Greece, and Israel.

Note that already in ancient times the proximity of the 'Israel/Persia' concoction we call 'monotheism' and the Greece/Rome diffusion field begin to collide with the strange outcome that we see of Greco-Roman and Judaic, soon, 'Christian', oikoumene generation. We may argue that the blend redounds to the advantage of both, yet still see that the collision leaves some strange anomalies in its wake. But the monotheistic diffusion field is in many ways tailor made for a head start toward globalization in a way that is less militarist than the Greco-Roman. The point for us is that the limits of the Roman Empire become the frontier effect zone for the rise of the next transition. Its imbalance in relation to the whole is misleading. Its rapid expansion into a global diffusion field via economic integration soon creates the world's first global oikoumene, and that in rapid order visible already in the nineteenth century. We can see that overall this has nothing to do with Europe as such. The modern transition is not about 'European' civilization but the appearance of nationalism creates a series of

cultural subjects, like the Greek city states on a larger scale, and a disaster, in terms of regressive wars between states, weakening the whole effect in the same way the Greek city states exhausted themselves in strife, viz. the Peloponesian wars.

We should note the elusive subtlety of our model: the effects of system and free agency explain many things: among them the way the whole can enter into counterproductive effects that are not the result of the higher developmental factor. A good example is 'empire' building and its degenerate tendencies. In antiquity the rise of empire begins at the wake of the transitional era, and is always a lesser process, whatever its long term effect of integration. We can see that the rise of monotheism in the Judeo-Persian mode created a hoped for challenge to this aspect by suggesting an ethical stance on issues of cultural action, with whatever limited success. In the modern case the very different but related problem of imperialism rises to curse each of our transitional areas.

Note that system action projects ethical potential in the expansion of its action, never empire building. But it can't control the whole field of free action. We thus see instead of empires a series of transient imperialisms that in each contribute to global integration and in the process degenerate immediately into ethical degeneracy. The seeded emergents of the transitions are not sufficient to forestall the rapidly decaying ethical monstrosities arising in their wake and beyond the control of any larger action. We see the deeper reality and dilemma in the case of e.g. the British imperialistic globalization in India: it is seen at once as an immense extension of the diffusion field of the modern transition and one praised by many of its participants soon victims of the 'dark side' of the imperialism clearly never intended by the larger eonic sequence. Here the issue of capitalism arises in a similar ambiguity of effects to that of 'diffusion field degenerating into imperialisms (which are not the same as 'empires': empires can last centuries, the modern imperialisms usually finished in short order. We note then that the effects of system action and free agency go a long way toward explaining many things, not the least the rising degeneracy of field action in the expansion of the whole> Our eonic sequence operates at a high level of ethical action while its field of effects is less sanguine. We see the exact difference in the passage from the Greek transition, its last echoes so clearly seen by the end the end of the fifth century BCE, followed by the reign of empire in the era of Alexander in the onset of the 'middle world' which is not yet 'medieval' but already closing toward a 'middle world'. This raises

the question of the ethical nature of macro action. It is in one way a mystery, yet we notice that the macro factor always operates at high potential and evokes however successfully an 'ideal' standard of action, while the middle periods show rapid degeneration.

We should pause a moment here and consider the unsettling way that eonic effect has its fingers in all human cultural 'pies', leaving us to wonder what civilization would look like without that 'macro action'. Perhaps a lot like the Paleolithic.

A great suspense arises: how much of history can man claim as his own? And what is the implication here for the future? Could man learn to replicate the eonic effect, for example, with a new life form on another planet?

We the reader will notice how we start with a simple picture that moves into greater and greater complexity, and one feels lost. But the larger picture is already clear and provides a magnificent picture of a simple way to 'evolve' civilizations, granting that it action is still mysterious to us despite its outer action. We need to explore 'reality' models, from the reductionist scientism of post-Newtonian physics to the noumenal/phenomenal discourses arising in the Kantian realm, and not least the peculiar mysteries of quantum mechanics. But in the end our subject is sui generis and fails to conform as yet to any known field of knowledge. But we do have already the basic elements needed in our simple model and its descriptive account of the mysterious action behind the evolutionary mystery of civilization, and behind that the mystery of human evolution itself.

We have raised a number of issues and barely discussed them,and there are many more. But we have resolved to a short account. The many issues are very tricky, and no doubt not clear at all. But the basic glimpse of the eonic effect is there. The main task here is a bird's eye view of the eonic effect, to start. Our snapshot of world history has uncovered almost without trying the presence of a non-random pattern of universal history by simple inspection. This pattern of self-organization can give us an empirical basis for considering the questions of human evolution. Instead of speculative theories like Darwinism we can discover a sense of universal history, thence evolution, purely empirically. To sure, 'facts' are seen from a particular perspective, but this doesn't alter the basic finding. Our suspicion is confirmed that high-speed change can occur on the scale of just a few centuries, witness the Axial Age. And this effect shows us that evolution is hiding behind history in the form of a series of intervals of rapid emergence. World history yields its secret to simple periodization and shows from the invention of writing

a clear developmental sequence, with a question mark about its probable source in the period of the Neolithic, the natural starting point for the rise of civilization. The great clue of the Axial Age suddenly provided the gestalt of a larger system at work. The Israelites were right, there is a process of greater evolutionary dynamism that frets the universal history of man.

It is at first illogical, it seems, to confound evolution and history. But with a little reflection we will see, first, that the two must be logically connected, and, second, that the data we are discovering directly confirms that logic. This evolutionary sequence is a robust empirical foundation for understanding world history, in the context of evolution. The relationship of evolution to history must resolve a paradox. The passage between the two could not take place instantaneously. It might show a series of transitional intervals that are evolutionary from one perspective and historical from another. But that is just what we are seeing: a series of 'axial intervals' or transitions that express a kind of evolutionary advance, and the epochs in between them that seem to express the historical carrying out or fulfillment of those transitions. What is remarkable is that we see this in historical times, and in a fashion documented by the rise of the technology of writing. It is futile to say that evolution must be purely genetic, since we can see that the 'evolution' of civilization is something more. We have the first glimpse into the nature of human evolution: it is a larger process than the purely genetic development of the human organism. And we can see its last stages in the emergence of civilization. There are many more things to consider here as we proceed, but we have the basic insight into how we can revise our views of the meaning of evolution.

We have barely begun, yet the reader has surely overdosed. We must press the reset button often retreat to the bare model. The simple starting point leads to a vast number of strange particulars, from the influence of Zoroatrianism on monotheism, to the diffusion if any of the Old World into the new.

The Enigma of Israel

The question of 'Israel' is remarkable indeed but suffers a core confusion. The eonic emergence of monotheism (which had a prior history in the stream) is directly clocked to the transition but the result which was noted by the Israelites was so extraordinary that they thought the effect could only be divine action. The Israelites were almost unique in noting the eonic

effect but thought it something else. This springs from the way the sudden appearance of novelties (900 to 600) seemed miraculous. A similar effect occurs in the modern transition but in a reverse, secular fashion: note the way the *philosophes* sense they are detecting a new age in history, and they were correct.

The issue of Israel is a stunning piece, as its subjects well sensed. The Exile made them think of an agency that could direct whole civilizations, and their almost magical seeming disappearing kingdom made them begin to think in terms of a universal religion. Note that this model does NOT explaining the particulars of Christianity which arises well after the divide even as it seems to carry out the implications of the Old Testament. The exact nature of the Christian emergence thus requires a different explanation: free action versus system action. Unfortunate confusions arose in this circumstance. We should defer discussion noting the parallel of a theistic and atheistic religion is exact and exotic 'eonic' timing.

> Although the eonic effect shows the real dynamics behind the saga of Israel the whole subject remains beset with a decided obscurity. The question of Israel is a truly spectacular case of the eonic effect at its trickiest but unfortunately it is confused by the issue of 'god' in history. We see from our model that theistic historicism doesn't work. The resolution is to see that in parallel with Buddhism in India monotheism is an 'eonic emergent' process that turns into a world religion. But in a confusion of terms and processes the emergence of monotheism is confused with the explanation of the 'eonic interval' in Israel/Judah. But small wonder the Israelites thought they saw god in history. But unfortunately the whole subject is confusion. But who wouldn't wonder at the stunning blending of Zoroastrian and Israelite elements into a first monotheism in the Exile and just at the divide period.

The question of Israel is thus elusive but resolves itself if we consider two elements:

- the stream and sequence must be clearly distinguished: Moses, etc, is in the prior stream and the Bible shows this in the semi-mythical character of its saga. The period after ca. 900 given by our glove model shows suddenly something more like history in the stunning saga of Israel/Judah and the mysterious disappearing kingdom effect (whose implication seems to be the transcultural birth of religion)
- In parallel with India producing one world religion Israel spawns the genre of monotheism at first in a crude tribal god as Yahwehism
- the transition ca. 900 to 600 BCE shows a stunning fact: the Israelites

began to sense the onset of a new era and created a myth of revelation which was then incorrectly applied to the eonic dynamic.

- the appearance of the Prophets is a remarkable case analogous to what we see in the many other cases. But if they correspond directly to a figure such as Homer they are truly innovators exploring the field beyond polytheism with a 'one god' construct.
- the concordance of the 'divide' boundary and the Exile is a stunning 'miracle', no, eonic effect, as it is the Exile which triggers the blending of Israelite and Zoroastrian 'monotheisms' (it is unclear whether the real source of the subsequent monotheism was in the Persian Exile)
- The Israelites couldn't believe what they were seeing and put two and two together in a superstition of Yahweh, yet a remarkable first: sensing discovering the eonic effect. We should easily be as confused ourselves, and hope for the brilliant intuitions of the prophetic era.

This is a truly extraordinary history but unfortunately the Israelites confused the output of the transition as the eonic emergent 'monotheism' and the dynamics of the transition, which they confused with theistic action. The age of Revelation is thus an eonic Axial interval effect showing the emergence of monotheism in an era passing beyond paganism (in the Occident) with the parallel Buddhism in India. We might also include Taoism and Confucianism directly although these superior idioms are not quite 'religions' in the same sense.

The case of Christianity is another issue: it is not the result of a transition and has a different character, as does Islam. Standing back we can see that the Israelite transition is set to generate an oikoumene field integrating cultures in a unity and this action passes into a secondary formation in the emergence of Christianity. The latter is an obscure mystery in its startng point and not easily analyzed by modern thought. But figure Jesus might be explicable in terms of a later phenomenon of the 'sufis'. We lack the real facts in any case but the overall gestation is a most appropriate continuation of the by then crystallized and still tribal Israelite constellation.

Note that the Israelite transition shows eonic determination, or system action, while the later Christianity shows 'free action' in a diffusion field.

But free action can include many mysterious possibilities. The source of Christianity thus remains a bit mysterious, and we have at least created an overall framework. Not even secular humanists have figured out the case here. But we must point to the accumulating confusions of history, theology, and the cargo cult effect of detecting the eonic effect and thinking of 'god'.

We must be clear: if we consider that the eonic effect isn't theistic action, then what in effect is it?

We will leave this question for later, but the 'evolution' category emerges , as we have noted, and we observed that 'real evolution' is transformation over a region, and is ti clear thus in all cases.

Looking backward we have to ask if the whole Judeo-Christian sequence was a failure to realize the correct outcome of an initial potential. The whole affair was far too tricky for the executives of the eonic macro effect and the result would seem now too filled with superstition. But this problem has probably always been the case, even back into the Neolithic. But world history seems a series of cargo cults, one after another as man attempts to decipher his macroevolutionary field, if he observes it at all.

The long history of Indian religious history

The history of religion in India is very confusing and conventional accounts are now distorted by the 'Out of India' and 'Aryan Invasion Theory'.

The Modern Transition

The implications of our model are that the rise of the modern is more than just some development from the middle ages but a subsequent transition in our eonic sequence following a frontier effect as it arises in a fringe corner of Eurasia, one of the last zones untouched by the macro effect. With almost uncanny precision 2400 years after the 600 BCE demarcation a series of zones take off into what is perhaps the most innovation and explosively revolutionary periods in world history. Between 1500 and 1800 the world system produces a new kind of civilization and creates a diffusion field that rapidly globalizes the effects of the transition.

Consider the parallel moment of the emergence of the Industrial Revolution. We have noted the way technology and economies are not deramdomized: they occur in a more or less random continuous pattern, increasing over time, perhaps. But this is not always true: the reason is obvious: as man evolves technologies emerge and then become the objects of his free agency, and he begins to invent more like this, on his own. But the eonic dynamic we suspect was originally involved also. We see this in the Industrial Revolution, which suddenly has a technological leap into steam engines. We cannot quite say, but clearly a new kind of capitalism, the Industrial Revolution and a new technology of machines emerge in concert climaxing at the divide, ca. 1800. There is a boost here, but then the process passes into

free action and in fact the capitalist era seems almost to take over the outcome we call the modern transition. So let us note at once that in concert with the new kind of economy and technology the idea of socialism emerges. Let us note clearly the point: capitalism, and socialism appear in concert, although each has had partial appearances along the way. What does this tell us.

Let us note that this whole period is that of the Enlightenment, and again in parallel, the Romantic movement. The modern divide is thus almost fantastic in its complexity. Let us note that we are not speaking of European civilization. The modern transition occurs with stupefying precision as a frontier effect in the regions that were part of the frontier of the old Roman Empire: Germany, England, France, and Spain. In an ironic twist the north of Italy is and is not a transition area: it is part of older system but it is also itself a sort of frontier. The fascinating case of Italy requires a separate discussion. Bur overall this data shows us the strange precision of the frontier effect. It is hard to credit this, but our model simply 'works' and spouts an answer we find hard to grasp. Northern Italy...

Skeptics are welcome here and will tend to reject such a model, but the evidence is against them. The pattern as it expands defies all odds of being random. We have a host of arguments in our favor and a close look at what a transition looks like; we notice one of the properties of our model which led to some ambiguity in the earlier case: a transition is concluded with a divide, an obvious statement with some striking implications. A good example, to reiterate,is the phenomenon of transitional divide:

If we examine the period just before the modern divide, i.e. conclusion to the transition, ca. 1800, we see the massive clustering of innovations just before that date. It is almost unbelievable in its clustering of innovations, advances, art, literature, music, philosophy and science. The previous three centuries have been themselves remarkably creative but the effect intensifies just near the end of the transition and we see the period from the mid eighteenth century into the early nineteenth century almost like a packed suitcase of novelties, and revolutionary dynamism.

We should conclude this short account and move to a conclusion. We introduced two terms, econosequence and technosequence, forgettable terms to make a point. We can just think of economic histories and histories of technology. These histories are not the same as 'eonic history'. These histories are continuous and have passed into human action as forms of culture and self-development.

Compare the history of technology with the history of classical music: the first is now almost steady state or increasing exponentially. But ordinary cultural factors are steady, and cases like classical music, perfectly correlated with the modern transition, climaxes near the divide and then starts to wane, by twentieth century exhausted, or else with a mutation into something different, viz. twelve tone music. Technology has thus become a human invariant. Undoubtedly that was not always true, although stone tools are perfectly good examples of technology that in their own time slowly became continuous possessions of cultural man. Modern civilizations show an explosion of technology but the basic structure of the eonic sequence is still not open to manipulation by human action. The scale is too immense. We would need a 'technology' that operates over tens of thousands of years, is able to scan whole civilizations, induce creative energy, and sort out ten of thousands of cultural streams and emergents.

The question of economies is also not a part of the eonic sequence, except as a component, with a probable exception that we noted, the onset of industrial machinery, the perfect example of a technology still an eonic emergent but then passing into human continuous streams. We can't quite say, save to note the amazing correlation of the Industrial Revolution and the modern divide. And this raises the question of capitalism which also seems to mutate at the same time as the Industrial Revolution.

The case of capitalism is tricky and ideological, but let's note that it is ambiguous: it has existed in all history yet seems invented in modern times. We see this many times in our account. Both views are right.

We should try to fret the ideological debate here: socialism and modern capitalism appear in tandem, a giveaway to some future development. In any case economic history is always continuous, man must live and consume. Ancient capitalism was clear in Greek times, yet seems invented or reinvented in modern times. We can safely guess that two things in tandem have a dialectic or duality in search of combination. The future is not yet there, how can we annex this our account.

Man is learning to construct and control economies, but only up to a point. But even if man merely tries to control economies our point is made. In fact, contemporary leftists would claim that capitalism has distorted the cultures in which they operate. It confusing because it is set up to operate without intervention, so to speak. Understanding is required, as it were. The place of capitalism in world history is of great interest and the modern transition shows a stream and sequence effect to create a supercharged

'capitalism'. But the socialist duality/dialect arises in synchronous action simultaneoulsy We will explore something called the 'discrete freedom sequence' as a variant clarifying the 'end of history confusion' from Hegel.

Note on the German transition. The vital distinction of system action and free action...: The German subset of the modern transitions and its frontier effect shows an almost incredible number of innovations and cultural novelties. And then after the divide a new element enters, if we compare Kant and Nietzsche we can suspect the onset of something ominous. And then in the twentieth century Germany and Italy suffer catastrophe in the arising of fascism. In our model we are unwitting rescued by the distinction of system action and free agency. Many become confused here. But the fascist/Nazi interval is almost certainly not some latent outcome of the German transition. The rise of these malevolent rightist interventions are just that: interventions by organized reactionary elements. No more stark example can be found for the distinction of system action and free agency.

End of Eonic Sequence?

As we start to notice the eonic effect its action is probably completed. Man is therefore on his own, an ominous state of affairs since man cannot control the creative action of the eonic sequence. Perhaps that knowledge is there but still latent. But who is to direct this? The religions are defunct remnants of the Axial Age and are waning in secular times. The politicians are mostly Machiavellian psychopaths, beyond intelligent action. It remains to be seen how the future will thus unfold. The collapse of the Roman Republic is an obvious topic to be studied!

This eonic effect or driver operates very much like punctuated equilibrium with a sharp impetus in a set of transitions at the start of each new era. This process shows a directionality in the way it redirects world history as each phase. We hardly dare use the term since it has prior owners, but its basic semantics is useful enough. But there is a basic difference: equilibrium is not wanted and only a sign of falling away from development. A close look at our transitions shows often two centuries of rapid development and flowering after the divide, as with the case of Archaic to Classical Greece. If we see this then we should urgently look to see if our analogous two centuries past the modern divide shows any signs of sudden fall off in energy. The question is tricky because the factor of technology is now autonomous, next to a similar state of economy, two factors we wrote out of the eonic effect.

The process however is teleological in multiple and some very exotic

meanings of that term. The semantics of the term 'teleology' is often misleading. Real teleology can sacrifice a given unilinear direction to multiple parallel tracks and we see this in the so-called 'Axial Age'. The effect shows that a teleology of globalization cannot force one region or track on all others but must have a track in all regions in a preliminary to a final integration and this is what we see in modern times as the exotic frontier effect jumps to the fringe of Eurasia and creates a new global oikoumene at extreme speed and already after two centuries the planet as a whole is close to new oikoumene of globalization, a process barely complete, but in essence clear in the light of all its precursors. But the glue of capitalist economics and industrial technology is already open to a new challenge of social re-creation in new forms of democratic society, democracy being a creature of the Greek transitional era, and then once again the modern transition. But the Greeks also invented socialism and communism in bare speculation.

Mankind now confronts the probable ending of the eonic sequence and the great gifts of that set of transitions are at an end as man confronts the existential uncertainty of his free agency in the construction and maintenance of civilization. Man must graduate from tinker technology to that of the eonic sequence itself, operations directed over a range of ten millennia! The industrial machines are altogether primitive by comparison with the mysterious technology of the eonic effect.

This future is not even conceived as yet and tokens a near cosmological scale of planetary action in a new kind of terraforming. It is clear that the kind of indifferent ecological destruction visible in capitalism shows its limits and the need for a reconstruction. Our modern transition provides all the seed ideas and the socialist milieu appears promptly in concert with the Industrial Revolution and the 'New Capitalism' (we invent the term to indicated that capitalism is present since the paleolithic trade in obsidian and is a factor at all stages of civilization. But the modern entity we call capitalism is almost a new invention. This is still another example among dozens of a stream element up-amped in a transition into something almost new)

One thinks of the classic book, *We are not alone*, discussing the idea of A-life in cosmology. The eonic effect strangely evokes a similar uncanny sense of some designing agent but it is very much a sense of planetary mystery instead of some cosmic process. But there is something far more elusive than a-life. Aliens are hardly going to be much different from man, in essence, or else have passed like Buddhists beyond manifestation. The eonic effect is far more remarkable than alien life which appears to be so hard to detect

lest humans cheat on their homework, which man has mostly flunked, an evolutionary basket case, laughing stock of the galaxy, yes?

We should therefore consider our account in Gaian terms or nicknames and note the way the surface of a planet shows us an aspect of nature in a mysterious action that induces most of the innovation in world history but which remains concealed as if in hiding. We must do a lot of work to accomplish this and such a study beginning with Kant's critique of design arguments to construct teleological machines able to operate of tens of thousands of years and to fully grasp the real psychology of human consciousness and the nature of creative action in the career of the human.

We have set aside the idea of 'god' not as a dilemma of atheism versus theism, but simply because the concept of god is incoherent and simply fails to grapple with the data we see. Nonetheless it seems at first a close call because the eonic effect betrays a strange sense of some presence at work behind the scenes and further forces the 'conclusion' that something that induces intelligent creations must itself be at a higher level than what it induces. But we must consider the ambiguity in our result: does the eonic sequence impose a teleological destiny or does it merely evoke the creative action of man himself? The question is not easy to answer, but one way or another our account shows a teleological system at work.

We would have to consider that a figure like Hegel had a similar sense and invoke a concept of Geist in a post-reformation post-Christian notion of 'spirit' or 'mind' in nature. He also attempted to answer to Kant's Challenge that we have made the formal starting point of our discussion. And there our neutral account fares far better than the speculative lore of 'gaseous vetebratology' that animated that great thinker who however promptly received a hail of rotten tomatoes in the gestation of positivism thence scientism and not least the fulminations of the materialist prophet Marx who was sufficiently of that time to have expropriated Hegel's dialectic to his materialistic fundamentalism. The problem is that Marx's theories of history based on economic categories are too reductionist as we see it now and his classic stages of production theory based on a set of epoch different from ours, viz. feudalism, capitalism and communism. We see at once the problem with this: feudalism is not an epoch and is a medieval phenomenon in the middle part ('medieval') of our second epoch of the eonic effect. Capitalism is not an epoch but a set of processes that stretch from the Neolithic to the modern era when the Industrial Revolution matched with capitalist finance and economic ideology made it look like a new invention.

But capitalism in essence goes back to even the Paleolithic and the trade in obsidian. The ancient world of the Greeks shows financial instruments that clearly are in essence the precursors of the modern versions. Capitalism in primitive form was alive and well in antiquity. It is the massive explosion of scale in relation to new mechanized technology such as the steam engine and the factory that gives us a sense of capitalism as a new era in history. But our account suggests a different view: the massive innovations of the early modern or the 'modern transition' are so numerous and complex as to dwarf the capitalist interloper just at the end: the modern transition reinvents religion in the Reformation, reanimates the scientific revolution, produces multiple schools of philosophy, jump-starts revolutionary actions in the re-emergence of democracy, in a list of innovations that would take pages to even list, let alone fully describe.

To conclude, man needs to master the eonic sequence and yet he seems as yet far from that possibility. The action of the eonic effect resembles a 'field ' action such as we find in physics, although we should be wary of any direct analog. However a computer built into an electromagnetic field is at least intelligible science fiction. We are in the presence of a mysterious planetary effect whose action can easily decay into false depiction of consciousness or aliveness. To be alive is a property of living entities in an ecological context and does not necessarily apply to the container of that life, i.e. a planetary matrix. To be conscious is related to but distinct form aliveness and remains a mysterious even to its own agents. We have suggested the distinction of consciousness and will in the terms of some still unknown psychology of man. The 'will' pace Schopenhauer is a cosmic phenomenon and would pertain to the laws of cosmic bodies, The issue of consciousness refers to a planetary organism and not a cosmic body. But just there 'consciousness' may have its own cosmic aspect, who knows? The transformations of consciousness have millennia of study and are especially present in the Indic stream. The reference of consciousness to larger realities does occur in that legacy, e.g. the equation of atman and brahman, but that is not grounds for any kind of simple conclusion.

We lack all these sciences necessary for understanding the eonic effect but that will change no doubt in this cycle of civilization which is given to understand the (eonic) evolution of both man and civilization, to see the connection of the two. It would seem appropriate to compare notes with alien civilizations, if such exist, and yet that might be disastrous in its effect.

Outside help, like cheating in an exam, counts a zero. Man must master his own evolution and that requires an order of magnitude of knowledge beyond religion, politics, technology and economy. But since the decision has been thrust upon man, sink or swim, we have no choice in the matter but to swim.

Two extremes of explanation

We can explore two extremes of explanation in terms of our model:

Devangelic powers...

We should introduce a side idea almost as a phantasm, a good way to break one's neck as to theory, but in a potential extension in fact to materialistic thinking. The point is we have some explaining to do with a creeping design argument, and we may as well go 'sci fi' for a moment, with the idea of AI in the background for future thought.

Our monster idea is that some form of evolutionary mechanism in a kind of learning software mode (AI) computes evolutionary form factors which then are tested against adaptation. This speculation is entirely illicit in terms of our mode of thinking, but if you think you think you see a monster looking in your window then it is a question whether a new Linnean category or psychiatric couch is our next step.

Unacceptable to secular thought but long since within the cultural sphere of human thought is the question (even referenced by Kant, the or 'a' demiurge) is the existence (sic) of powers within nature that function in terms of material but seemingly spiritual contexts. This discussion has long foundered in theological myth, but the point is that the 'laws of nature' fall into the category in some accounts of the factor of 'will' which is itself a part of the category of scientific law. Very smart laws in sciences that are unknown to us.

Skepticism is the materialist's response to the mythology of spiritual entities. There is no logical objection as such to such possibilities. Almost all cultures until modern times believed in versions of this, viz. the 'god realm' of positivistic Buddhism...The Kantian speculation of a demiurge, etc...Note the distinction of consciousness and will and the closeness of 'will' in some writers (e.g. Schopenhauer) to the idea of 'scientific law. The planetary character of cosmic evolution is undiscovered country.

> We have to explain how an invisible 'something' can seem to stand at a higher level to the 'mechanical' generation of creative moments in the

intersection of free action and system action. No known explanation, yet...

We should note at once we have not the slightest proof of this, but as an extension of materialist thought it is a self-defense concept and hypothesis about archaic religions. The issue is not some superstition but the equivalent of intelligent machines in nature.

Look at our transitions: the have their finger in the pie of art, religion, philosophy, and seem to be the 'voices of silence' in some fashion. We simply note the concordance of creative action and transitions, and stop there, for the moment.

AI: artificial intelligence, learning machines

Although we have no science of history we are moving in that direction, and, for example, the sudden appearance of AI or 'artificial intelligence', while not directly applicable, suddenly extends our range of understanding of the possible and we begin to graduate from spiritual notions to new forms of suspected natural processes. Some unknown natural 'closing' or converging mechanics of information like AI suddenly incrementally frees us from design confusions as we begin to sense what is possible and what to look for. As we examine the mystery of our transitions we are increasingly alert to the vastness of natural explanations still untouched. But our transitions must in some way invoke the issue of consciousness...

A first Conclusion

We have presented a short version of the 'eonic effect' and the model that goes with it. The next step is to reify the generalizations with studies of world history through study and reading: a gateway to *World History and the Eonic Effect*. The study of world history is hampered by a host of ideological obsessions and has left in its wake a limited set of perspectives, that in a period when the data arriving from archaeology has exploded and greatly extended the meaning of the term itself. Suddenly the data of world history has shown us the clue to a dynamic, that long sought key to a science of history. Most of our categories of thought are challenged by the eonic effect but we can attempt to consider the issue of science and the need or a n extension beyond its reductionist perspectives.

Before drifting into complexity we should emphasize the simplicity of the overall patterned dynamic. It is only that we are at first confronted with

the unfamiliar

The explosion of knowledge has suddenly produced a new insight into the question of historical dynamics, and the result is an exotic new interpretation of the classic question, What drives history? The long delay to any answer to the question now has a simple explanation: lack of data, and that over a sufficient period of time. The answer to this question suddenly stands out as 'obvious': we see a series of periods of concentrated innovation, like transitions, in a series, periods of fall off and decline, and a strong suggestion of directionality. But we also see this sequential aspect is compounded with a fascinating complication: parallel, synchronous transitions in a schematic that defies conventional assumptions.

> The Eonic Effect: the hidden structure in world history We can call that sequence of three transitions and the epochs in between them the 'eonic effect', as a sequence of three epochs, and note the way that this pattern suggests 'evolution' at work, 'evolution of some kind'.

We are not alone, a phrase from a famous book on extra-terrestrials, comes to mind as we sense a mysterious presence, close to home, that seems to animate world history. The scale and focus suggests not some alien entity of sci-fi, but a planetary dynamic, a sort of Gaian field.

As we examine the eonic effect we get a similar strange sense, in the classic phrase, of the voices of silence. Some kind of design in motion with a mystery behind it animates world history but we must raise this issue if only to warn against mystical historicism and point to the way this sense confounds monotheism, which is not our subject. A secular humanist once noted that the Bible was a great work of literature marred by its confusions over the idea of god in history. We must protect our stunning discovery navigating between the Scylla of scientism and the Charybdis of theistic religiosity. Our mystery is a variant of the design argument, but the implied deduction of a 'designer' has long cursed the design argument, so well exposed by Kant.

The idea of design is rejected by science and exploited by religion, but we must find a middle way armed with the simple observation that biological systems are pervaded by design, and must confront the need for science, one as yet unknown. The idea for a science of history has lurked in the background, often confusing its study. An examination of the fate of the idea of 'evolution' might alert us to the difficulties of theories about history. The question of science remains crucial but the example of causal physics tends to confused thinking and misconceive the crucial issue of historical

The Teleomechanists

As Timothy Lenoir notes in *The Strategy of Life*, "Teleological thinking has been steadfastly resisted by modern biology. And yet, in nearly every area of research biologists are hard pressed to find language that does not impute purposiveness to living forms. The life of the individual organism—if not life itself, seems to make use of a variety of stratagems in achieving its purposes. But in an age when physical models dominate our imagination and when physics itself has become accustomed to uncertainty relations and complementarity, biologists have learned to live with a kind of schizophrenic language, employing terms like 'selfish genes' and 'survival machines' to describe the behavior of organisms as if they were somehow purposive yet all the while intending that they are highly complicated mechanisms. The present study treats a period in the history of the life sciences when the imputation of purposiveness to biological organization was not regarded as an embarrassment but rather an accepted fact, and when the principal goal was to reap the benefits of mechanistic explanations by finding a means of incorporating them within the guidelines of a teleological framework. Whereas the history of German biology in the early nineteenth century is usually dismissed as an unfortunate era dominated by arid speculation, the present study aims to reverse that judgment by showing that a consistent, workable program of research was elaborated by a well-connected group of German biologists and that it was based squarely on the unification of teleological and mechanistic models of explanation."

dramatics: the presence of actors, or free agents.

In the end design arguments point beyond theology to issues of teleology and while this is not a part of conventional science it remains in principle not a spiritual but a potentially scientific concept. Since our account is descriptive we defer such an attempt at a future science. The system we are depicting suggests very strongly a teleological account but it is a very elusive

Teleology

We will raise issues of teleology but we cannot claim to resolve them, even as we give a portrait that overwhelmingly suggests some teleology. It is not likely that rejecting teleology is any less speculative. One way is to simply consider the issue hypothetically: even if a strong impression is not proof it can be less off the mark that views of flat history. So we can take teleology on provision, and directionality as a lesser claim with still more plausibility. Religionists will always take teleology as a design argument, but our model is 'god proof' (but not atheistic or theistic).

> We note in passing Kant's 'antinomy of teleological judgment' in his third critique, and consider the grounds for combing a mechanical and a teleological argument...there are many ways to consider the problem with the primitive 'feedback device' probably hinting at one answer in a generalization of its action in the 'attractors' in some kind of system. A higher dimensional argument is the only way to ensure consistent causality.
>
> If a second step follows a first, we can detect directionality. Many steps in the same direction cement our conclusion. But the 'final step may remain unknown to us or in the future and might deviate at any point. Thus with teleology. But guesses can be powerful and sometimes vagueness carries its own proof: the vague 'purpose' of evolving civilization is easy to assess, clear by example and not subject to easy reversal as free action even by sudden outbreaks of barbarism. In our example of the emergent character of 'novels', the template implies implicit teleology but the resolution in actual fact as a novel is not predetermined.

The enigma of the eonic effect stands at the center of world history as the evidence now shows it, a low key yet utterly stunning result. That evidence is rock solid but incomplete, and hard to visualize, and perhaps in part unseen, as if noumenal. But we have a strong sense that the 'eonic sequence' goes back to the beginning of the Neolithic. How we interpret this is a difficult challenge, but the empirical foundation is sound and impossible to dismiss. Despite this, on the surface we can understand this because it is obvious what this system is doing, to a bird's eye view: it is like an amplifier in the stream of history that accelerates development. But it is also a source for

much of the creative novelty of developing civilization. It also resembles 'punctuated equilibrium', if we take the term as a conceptual analog, wary that the term has no real scientific definition.

We see a system operating in a long frequency, or series of epochs (noting that a three term sequence is minimum evidence backed up with interior correlations), each with a transitional interval at its beginning, and sometimes with parallel synchronous transitions, we see a kind of evolutionary driver repeatedly jump starting the development of civilization at given intervals of brief duration after which the system is under its own steam, the point of our distinction of system action and free action. Parallel transitions are causally incomprehensible, yet they make thorough sense: the time track must divide to encompass a greater area and diversity of a planetary surface.

The action is via the consciousness of historical agents who become creative in a given context of the transitional phase. This does not preclude the same in other periods, but then the free agent works alone and the result is the frequent barrenness of the intermediate periods. We remain unsure of the degree of real innovation: is the macro effect injecting de facto blueprints into history or is it injecting a kind of creative energy or potential that induces creative categories. It is like the novel (or a play): the genre emerges at one level, as an abstraction or form factor, while its realization is done by a free agent in a creative state, outside the transitions, perhaps. The eonic emergents in a transition are like this, potentials open to free agents as realization.

None of this is fixed determination. Although transitions dominate the phases of creative history, they don't preclude free action doing the same in the intermediate phase. The point is essential. The eonic sequence is not fixed or stable: as man learns the effects of the transitions pass into general history as free action. And many eonic emergents are picked up in fact from spontaneous creative acts in the intermediate phases. A good example might be the case of monotheism. Assuming some history of polytheism from early cultures the idea of the 'one god' emerges as a new idea. It is said to appear first in Abraham, a myth perhaps but one with a point, someone in the diffusion field of Sumer, or Egypt. The idea of the one god emerges in stream history (or consider Egypt) and then like a thunderclap it is picked up from the stream and becomes the amplified emergent in a whole transition constituting monotheism which then passes into general history thence to become a world religion, or several.

This example illustrates the way religions emerge in history and the

case of 'Israel/Judah' is remarkably parallel to the emergence of Buddhism in India. How strange, and mysterious. It seems our 'system action' is dialectically inconsistent yet operating beyond a distinction of theism, atheism in generating a kind of cultural bouquet of a given historical stream, on the one hand the Canaanite milieu of 'Israel/Judah' and the long historical stream of what is conventional called 'Hinduism', a misleading term. This case shows how the eonic sequence can recycle its outstanding tradition and yet bring something new. The history of the religious core of Indic 'dharmas' is ancient indeed, and it is an important speculation that this history begins in the Neolithic. The Buddhist distillation of this legacy is elegant and yet itself mysterious and the resulting collision of soon to be rival legacies is a tragic outcome.

A similar caution must attend the case of emergent monotheism in the Occident. The legacy of Judeo-Christian traditions suggests something like an unintended set of consequences and a collision or jackknife effect in the outcome of two religions instead of one. The universalism of the later monotheisms is clearly latent in the Old Testament corpus and the writings of the Prophets, but the strangely tribal enclosure of the starting point spells trouble for the future and the unforeseen emergence of antisemitism. We need to stand back here and see the refutation of theistic historicism: a divinity would never generate such a messy outcome as the deliberation of omnipotent will.

But if we caution against theistic historicism we must forgive the Israelites their confusion if the outcome of actual incidents is almost spooky in its uncanny logic. A good example is the way the Judaic transitions at its divide suddenly scramble a geographical basis with its intersection with the drama of empires, in the phase of the Exile and then the clear mixing of two monotheisms, Canaanite and Zoroastrian. This nexus of incidents is stunning in the way it defies the odds of chance and shows an effect at the level of whole nations and empires moved on a chess board, just as the 'Jews' themselves exclaimed as they puzzled over their extraordinary fate.

We should remind ourselves of the way the Zoroastrian legacy tends to disappear from western accounts as the long lost factor behind the genesis of a world religion. The elegance of this chessboard sequence in mixing Indo-European and Semitic stream cultures at a time when the two strains were in collision is impossible to reckon with sociological explanations of causal succession. The question of Zoroastrianism is under-studied here, and it is hard to be sure of the exact history. Zoroaster is not a transitional

figure, rather an earlier figure not unlike Abraham, if not fictitious, and by the time of the Axial Age intervals his 'religion' is already a kind of state religion and figment of empire. Zoroastrianism shows clearly the emergence of monotheism from a pantheon of paganism, and its blending with a Semitic version in the artifice of the Exile is eerie in its effect.

The idea of the frontier effect is key here. The Persian milieu seems to bound up in the drama of empires even as the gist of the case seems to be allergic to empires and 'intending' a challenge to the monotonous entropy of civilizations. The Persian world is caught in the politics of empire when the Israelites are underdogs and most ironically deterritorialized in the very transition focused on their 'sacred' territory. The later collision with the Roman Empire is clearly foretold in this collation of historical moments. We must wonder at the true nature of monotheism, and in the view of a later era the tremendous effect of a monotheistic religion in the passing of paganism tends to blind us to the core similarity of the two 'opposites': monotheism is a pantheon of a 'one god', male and by hindsight still too entangled in the very paganism it claims to transcend. If we compare the brilliant abstractions of Taoism, and the almost poetic confection of Greek polytheism we are at a loss momentarily to find any simple synthesis in the dialectical spread of the 'Axial' Age. And yet in a larger perspective the whole bouquet of effects is a prodigious display of cultural 'sampling' that will serve an epoch of developing plural civilizations still sufficiently isolated to exist in their own world with the World. There we see ultimately in monotheism a vehicle of cultural integration that will mixmaster an immense cultural variety under the aegis of a religious generalization. This outcome will, for better or worse, end in the field of developing empires, that perennial end state of so many transitional declines.

We should note that with almost no exceptions our macro process never creates empires. It always serves to honor the diversity and autonomy of regions and cultures while in the periods past their divides the onset of empire resumes in the wake of the creative starting point. No more dramatic example can be given than that of the occidental empire sequence. From Athens and the constellation of city Greek city states we see the grim progression of empire beginning so ominously in the wake of the great Greek archaic and classical period, with the onset of the Alexandrian period moving with geographical momentum in the world of the Roman Republic devolving into empire. Whatever our judgment here it remains crucial to see that empire building is never the effect of the creative transitional period. Witness the

birth of democracy in the wake of the Greek transition with its field of city states, republican experiments, and the stunning moment of Athenian flowering as a first democracy (although most things are already preceded by something in the field of Sumer, another such constellation of vigorous city states. And similar effects are visible in China and India.

We should note given these two examples and the rest that the so-called Axial Age, in our redefinition, does not show as such similar outcomes to a unified cause. Instead we see that different worlds emerge in a balance of possibilities. For example, the Greek transition is synchronous with the Israelite, and in turn with the Indic and Chinese, yet the outcomes are unique in each case. It seems that our macro process exploits a locality for its unique contribution. In the Greek case we see all the parts of a balanced cultural totality, while with the Israelite we find a specialized focus and outcome. And a similar judgment might attend the Indic case. In fact the transitional era in this case is not even consistent as it re-amps Jainism, confects a Upanishadic corpus then moves in the novel direction of Buddhism. We should note in passing the futile quarrel of 'Out of India' and 'Aryan Invasion' perspectives, the later apparently winning the whole case. But if so then we must grant the great antiquity of so-called Hinduism with, however, its earlier manifestations being non-Sanskritic. The legacy of religion in India is a prodigious mystery and a veritable encyclopedia of different experiments.

In the Occident we witness the spectacle of decline and fall in a gruesome sequence, from the realm of city states to the consolidation into empire and mixmaster diffusion fields. Rome, we should note, begins essentially as a city state of the type of the early Greek field and its great republic is cousin to the vast field of Greek colonies and diasporas. The wearing out of that republic and the onset of empire needs its own concept as some metaphor of entropy stalks explanation with a facile, yet compelling, explanation. There is a strange inevitability to this devolution which nonetheless is a great stage of world integration and diffusion of the results of creative civilization. We confront the almost inexplicable moment of transient creativity at the dawn of the Roman empire as its integration spawns its own literature, to say nothing of the colossal generation of the down field religion of Christianity as if destined itself to be a 'religious empire' digesting the barbarism of the Roman juggernaut.

We should note the decline in the Occident is extreme and severe in its effect and after a millennium of brilliant civilization, things indeed fall

apart. We confront in this context the mystery of slavery and its partial redemption in the context of a Christian 'meta-civilization'. As with empire, our transitions never as far as we can seed slavery, which is we suspect a later degeneration of the civilizations in the wake of Sumer. Slavery is not a fundamental of civilization but a degeneration and in the Greek transition we see a continuity of increasing slavery challenged on the spot with the overlaid birth of democracy and the entry of the concept nexus of freedom. We can lose the bird's eye view and fail to see the unified action of a whole epoch and the gestation of a new type of culture beyond slavery, if not class.

The question of slavery is tricky because it suddenly re-amps in the modern transition and evokes the final dramatics of slavery in the modern transition as it gives birth to abolition. This requires a study of the history of capitalism in our account and also the observation that slavery had long died out in the European sphere, more or less, and the regression if visible only in the dispersion and diffusion field of the modern transitional arena. It must therefore suggest the conclusion that the eonic sequence never generates slavery and moves as able and timely to proceed beyond it. The time span here is gruesome but a reminder that the scale of the eonic sequence is millennia and that a problematical outcome can require arduous waits as system feedback takes effect.

Our model is very powerful but tends to sound like a foreign language. But the overall perception of the eonic effect comes into view and we cut short our discussion which tends to go into a fugue of dozens of concepts mixing into an increasing obscurity of the account.

We will move to a conclusion in the next chapters but note the way the above discussion shows how exercising the model tends to turn into a fugue where abstractions overtake all discussion. And the detail expands rapidly in almost exponential fashion, as a book with footnotes leads to dozens of new books each with footnotes, etc...It is important then to reground discussion in the basic perception of the data of the overall eonic effect and to continue with historical studies in the nearly infinite scope of the whole phenomenon shown without succumbing to metaphysics.

APPENDIX 2: MODEL, CHRONOLOGY, BIBLIOGRAPHY

1. An Outline of History

Looking back on the ever-expanding outline of history that archaeology and the human record present to our vision, we can isolate to observation an emerging pattern of two historical intervals or 'eonic eras', and the three transitions between them, visible as cycles of cultural and social innovation on a scale of millennia, roughly 2400 hundred years—emerging as a pattern in and of itself, and as the last visible aspect of an earlier structure originating in the Neolithic. It is the *transitions* themselves, as temporal intervals of localized and rapid cultural change, in their geographical focal areas, that are of first interest, for they constitute the prime generative sources, as periods, of the steps to higher cultural complexity we call 'civilization'.

That the three periods indicated represent the three most fundamental, so-far visible, turning points, divides, or transitions, of the entire world system is easily demonstrable by reference to the facts of known history, to be clear that we are only seeing a subset of a greater process in which the New World and the Neolithic show connections, but no conclusive relation.

This non-random pattern is a challenge to more simplistic views of historical evolution. Any law of history, theory of cultural evolution, religious teleology, transcendental explanation, or political action script, or theory of economic determination ought to explain this pattern if it

claims superstitious or pseudo-scientific authority. We can illustrate our model explicitly using an outline of world history. This framework can also serve as a kind of database to allow constant additions to our data.

Our short history of the world is simple. The eonic effect reduces to a Table of Contents and the whole tale to three chapters, with three transitions connecting them. Although our approach is designed to start anywhere, no absolute beginnings are required. We have nonetheless summoned up the idea of Big History, history since the Big Bang, a recent innovation of historiographers, as the ultimate context of our history. We see three massive periods of advance, what's more, with obvious echoes and interconnections, clear evidence of three successive waves of fundamental advance, at equal intervals, and with significant mutual correlations:

Chapter 1: The rise of civilization ca. -3000

Chapter 2: The Axial Age, ca. -600

Chapter 3: The rise of the modern, ca. 1800

That's it. Our world history, we're done. A non-random pattern. These dates are really divide points for a set of intervals we call 'eonic transitions'. The term 'rise of civilization' is inadequate: our sequence probably starts in the Neolithic. We called this the *eonic sequence*, and set a frequency hypothesis to fix this obviously incomplete series in the domain of non-speculative empirical verifications. That hypothesis is more a way to preempt speculation than a practical part of our chronicle. It can also serve to silence at once the long history of speculative histories based on cyclical ideas. The eonic pattern is the only one that will work, whatever it means. But the history of cyclical viewpoints is a significant history in itself.

We have seen that the 'Axial Age' is really an interval, not an age, and that these demarcation labels cannot be instant turning points but must be transitions of some kind, *eonic transitions*. And these transitions show a characteristic divide as they conclude. We will see, looking at the modern period, that the transitions are about three centuries long. We aren't sure, but three centuries is sure to enclose the phenomenon seen three times in a row, and five times in parallel in the Axial Age. Or, more accurately, a statistical region three centuries long appears to enclose the phenomenon. The term 'Axial Age' is really two things taken together, a transition, a rough divide point, and then a period just after that starting a new era.

The Old Testament embeds a confused account of such a transition, and comes into existence, in final form, just after the divide, around -600. In Greece, the great era occurs after the divide, in its perilous moment of freedom. But the gestation period comes before. So it seems that even the exceptions fulfill this dynamic of eonic transitions. But it is all a bit fuzzy, as it should be, and our model is a guide, but not a dogma. On the basis of this we will see that three centuries again, as with the modern transition, looks to be the rough interval. We should reserve the term 'age' for the periods or intervals between our transitions. It is not the Axial Age but the 'axial' interval in our sequence. This scheme, we should warn, is highly artificial. And yet it works. Why? It is completely OK to challenge this, but the trick is to try it as an exercise, and in some detail, then its rough approximation will show something remarkable. Like scaffolding for a building, the periodization matrix will fall away, and leave a spectacle of universal history in its wake. We can approach this model with confidence, after initial puzzlement, because it represents the simplest and most obvious solution to the failure of random evolution.

1.1 Eonic Grid Coordinates

Our historical database will invent a new terminology around this idea in which the eonic sequence is a set of eonic transitions, statistical regions about three centuries in length:

(Eonic) Transition 1: -3300 to -3000

ET 2: -900 to -600

ET 3: 1500 to 1800

Below, we will recalibrate this in order to start in the Neolithic because we suspect that is where this sequence starts.

The idea of a Table of Contents is apt. Like the Cheshire Cat the dynamics fades into the background behind a very simple structure. As example consider a well-known world history.

> **Cheshire Cat Cycles and a Table of Contents**. Consider a world history taken at random, William MacNeill's TOC in his world

history *The Rise of the West:*

> Part I: The Era of Middle Eastern Dominance to 500 B.C.
>
> Part II: Eurasian Cultural Balance, 500 B.C. to 1500 A.D.
>
> Part III: The Era of Western Dominance, 1500 A.D. to the present.

Note how the TOC automatically reflects the eonic effect. The eonic effect is a Table of Contents. Note that our present is just outside the last transition. The question of the West, however, is problematical, until we see that the overall pattern is not about the West, but the frontier effect in the Western Eurasian sector. Since this 'civilization', the West, began in the agora of Miletus, Asia Minor, and hills of Canaan, it seems pointless to so name it. We can rewrite this TOC:

> 1. (Eonic) Transition 1,… era of the Mesopotamian/Egyptian oikoumenes
>
> 2. Transition 2,… era of the Axial interval, and *oikoumenes*
>
> 3. Transition 3, *the present*… ???? onset of first global *oikoumene.*
>
> 5. A new mideonic era…end of eonic sequence?

We detect what we have called the 'eonic evolution' of civilization. In fact our *first* transition is probably nothing of the kind, and we can compute backwards in 2400 year steps to posit some possible earlier transitions, but for now all we have is our *core eonic effect*. We could recalibrate our sequence with a different beginning. In the Appendix we will use a completely generalized terminology of 'eonic transitions' exclusively, expressing our frequency hypothesis:

'ET1,…' : ?????

'ET2,…' : ??-8100 to -7800

'ET3,…' : ?-5700 to -5400

'ET4,….' : -3300 to -3000

'ET5,….' : -900 to -600

'ET6,….' : 1500 to 1800

These transitions are quite artificial statistical regions, and approximate the unknown dynamic we can detect. We will also use terms like 'ET5+', or 'ET6+' to refer to the point of the divide and after, and 'ET6++' to refer to the period about two centuries or later after the divide as the system moves into its middle or mideonic phase. The purpose of this terminology is to produce global coordinates, 'ET5, Greece', being the Greek Axial transition: an interval of historical time over a given geographical region, an immensely complex historical unit, yet one with a clear dynamical pattern, as we have seen. We won't use this terminology all that much, but it represents, in principle, a way to move to a higher level of abstraction about differential evolution regions on the surface of a planet.

Be wary of course of this terminology. Why a matrix this crude could work so well is unclear, the mystery of the eonic effect, and a recipe for secondary deductions that might be false. These 'transitions' are *approximate statistical regions*, and there is no *a priori* reason why a monotone sequence should be the case here, and frequency patterns can do funny things, but maybe we detect a ticking clock. We need not decide to use our model, which allows us to act under a condition of ignorance, armed with the perspective of *relative beginnings*. The pattern indicated in its last three phases is a practical reality we always use, and can't ignore, whatever its theoretical interpretation. The Neolithic is close to falling into our sequence, but without as yet sufficient data.

Thus, the inadequate, but useful terms 'modernity' or 'Axial Age' can be replaced by these 'numerical coordinates', for differential geo-time-slices on the surface of a planet, not a recipe, however, for intuitive history, so we invent this terminology to make a point, and won't use it too much. This formulation, so far from being dogmatic, invokes a falsifiable hypothesis, and a reminder of how little we know, and will prevent, rather than encourage speculation, forcing us to keep examining the data.

The eonic effect will remind us that we can never safely make (dynamical-theoretical) generalizations about early evolution or history unless we are sure there are no earlier transitions. And we can't be sure. These would be the decisive factor in any form of explanation. Loose talk about how the

Neolithic arose is thus out the window. Having set up this terminology, we will barely use it, and relegate the scheme to the endnotes. Its purpose is to make a point.

What about the in-betweens, the mideonic periods, in our eonic sequence? We seem to have downplayed them, but in fact they are the crucial test points, where freedom is to be realized. We have created two, or multiple, universal histories, using the idea of cultural streams, and the eonic sequence. The first universal history proceeds along a mainline, the second is the set of cultural streams that make up the totality of human culture. We are always in the second, yet, *looking backward*, we can detect the action of the mainline, the eonic sequence. Note the schizophrenia in most world histories. They wish to be comprehensive and then end up retelling the history of Europe, apologizing about Eurocentrism, etc,… All of these problems disappear in our approach.

The first order of business is to see that this pattern is not about the cultures invoked in the turning points, but the greater globalization to which they contribute. We must be careful of universalism, and the multiplicity of culture remains a stubborn source diversity. But willy-nilly this progression toward a universal global culture is the first fact of our eonic sequence, and our current history. We can critique the dangers of Darwinism, but we can't change the difficulties that arise in a system using a minimum principle. We see the quite un-Darwinian 'natural selection' of temporary transitional regions. They are selected not for survival but to lead the way, and then yield to the greater oikoumene created. This system must exploit advance regions temporarily and this creates misleading perceptions, for example those of Eurocentrism. We can at least plant the flag of universal history in its strength: it is a tale of universal sympathy, and its subject is one community of man. But how can we create that community? The eonic sequence gives us a lot of hints.

We have learned our lesson about the Oedipus Paradox, and our model refers only to the past. We are free to do as we please, in the present, even contradict our pattern, but as we look backwards, we discover that there was a factor of eonic determination, macro-action, behind our free activity, micro-action. So the first requirement is that the present, or recent past, must be outside of the pattern, and in fact it is. But this freedom was also present in the past. Much of history is about trying to transcend history.

Ours is a model about human free action. Every moment of every willful and stubborn individual is a potential 'fourth turning point'. Consider the way such impulses are conditioned by the outcomes of our transitions. It is not so easy to step out of this eonic sequence. And we are left to wonder if our series is complete, or whether there will be a 'fourth turning point' in the future. We strongly suspect that we have reached the 'end of the eonic sequence', for reasons we will explore.

> **Floating 'fourth' turning points** We can invent an exercise, consider 'floating fourth turning points' inside our sequence: every moment of will. The projected 'fourth turning point' can float timelessly through the sequence, as we examine alternate potentials in our sequence. This idea has no official status in our model, but it is amusingly apt at times as we observe attempts to 'escape' history. The mighty Islam was the most massive effort along those lines. Bolshevism another. This idea can help to see the tension inside history, as man both realizes his macro-evolutionary history and at the same time is moving beyond it. Even his emerging freedom shows macro-determination, a paradoxical restraint on that very freedom. Then, suddenly, he is alone to realize that freedom by himself. Connected to this we see the many times when a large-scale social movement, e.g. Christianity, Islam, Bolshevism, postmodernism, attempts, or mere wishes, to overtake the whole of history with a teleological or crypto-Zoroastrian theme, like the Hegelian 'end of history'. These 'floating fourth turning points' are massive historical interruptions, but can they transcend history or the eonic sequence. But they should be the individual's self-discovery of the 'will' that is his freedom. Very controversial yet important issues….
>
> **Falsifications** This idea of fourth turning points gives us a model of falsification in practice! And we are free to try and contradict this pattern. But as we come to understand it, that will seem fruitless and wrong-headed. However note that 'falsification' is not theoretical, but an historical gesture with its own history!

Why do our transitions stand out? Because of the obvious correlation of major cultural innovations, which are relative transforms, or what we can call *eonic emergents*.

(Eonic) Transition 1: 3300 to 3000 BCE The birth of the state, appearance of writing, onset of Dynastic Egypt, and Sumer, first higher civilizations,…

ET2 900 to 600 BCE Onset of two world religions, multiple sources of philosophy, birth of science, Greek democracy,… The birth of secularism!

ET3 1500 to 1800 Onset of Reformation, secularism, English, French, American Revolutions, Enlightenment, another scientific revolution, another birth of democracy, Industrial Revolution,…

That's a very short list. An eonic emergent can be a person, cultural process, artifact, invention, book, or cluster of events. One eonic emergent can be inside another. These dates are rough approximations, statistical regions, and not hard and fast. Such a scheme is highly artificial but what is remarkable is how closely it reflects the data.

Each eonic emergent can be a zoom target, to zoom in on, and inside each are more eonic emergents. Pick any category, and follow it. The most remarkable eonic emergent is democracy. As analyzed in the last chapter, democracy appears twice in the pattern. Take science. It warbles on and (almost) off in this sequence. Why? Trace the history. What we include seems at first relatively arbitrary. The list grows much longer. This system is an arduous 'black box', but it gives us a windfall clue, the double appearances of several items. Democracy *starts* twice. We called this the 'discrete freedom sequence', and it might prove a clue to unlocking the riddle of history's 'black box'. It reproduces a classic Kantian paradox. In our terms, democracy shows eonic determination, macro-action, its realization free action. A surprising discovery, a new twist to the 'evolution of freedom'. Note the remarkable appearance of *double emergents*. The double birth of democracy, science, in the eonic mainline. That's very strong evidence for the type of model we will create, a discrete series inside a continuous flow, or a discrete-continuous model. It's like a feedback system. Something suddenly switches on, and interrupts continuous flow, or restarts processes that have died out, or slumped. The idea of feedback has problems, it's not quite the same situation, but the general idea is the same, a discrete interval or spike interrupts a continuous stream.

Myths of the End Times Note the amusing, or ominous way, in which the Zoroastrian theme enters into our terminology. Actually, that's useful because it defuses this potent and menacing ideology, even as it grants it formal status, by definition, like the idea of the Omega Point in physics. The end time myths are connected with our 'floating fourth turning points', and have produced a lot of confusion! The versions springing from the *Book of Revelation* are exotic in their hysterical futurism, and yet they spring from the Axial Age cornucopia and are a part of that history. And these ideas resurface promptly in the early modern. But nothing that we see can 'beat the system' that we call the 'eonic sequence'. Thus, despite our historical respect for Zoroastrian thinking, we need to isolate this unconscious 'archetype' in the basis of our actions. It resurfaces very easily in secular thought. Note that end-time patterns are the counterpoint to cyclical patterns, and our model unites both.

We need a narrative that is 'meta', as an outline or database surveying the sudden simplicity we have found in the immense complexity of world history. We need to keep it relatively short, since each interpretation of secondary histories will prejudice the basic eonic outline. Research is progressing so fast that much material will be obsolete very quickly, the better then to stick with a generalized outline. But from the arising of civilization onward, the basic framework of data is sufficient. But we need to posit multiple interpretations at each step, and leave the eonic outline in the background. At each step we can let a series of texts take over the task of narrative content.

Reachability: Two Universal Histories Historical narratives suffer the bane of selectivity. Ours is so selective if flies in reverse, a useful trick to solve the problem. Three small time slices are all we need. Having produced one universal history, we promptly create a vacuum and generate a second, as if one is trying to reach another. So our discussion, and the eonic effect, is really about the whole, with a strategy to reach that whole. Since this invokes some form of globalization, we note that it is not the same as the economic variety. Since the American continent was first globalized by the Indian his destruction by later European invaders could hardly be called globalization. We see that the planet is globalizing, but already globalized. The issue then is to do the job right. American

civilization put itself at great risk from this botched foundation. Teleology again!

Species Evolution Our data clearly reflects the fact that evolution must be that of a whole species, and we see explicit mechanisms to connect the whole and part, a factor missing in Darwinian-style theories. Darwinism has divided everyone against everyone else and falsely labeled it 'evolution'. It is clearly not possible, save as a destructive deviation, for one small subset of humanity to declare itself the evolutionary future and by 'survival of the fittest' attempt to seize the future of that evolution. The first shall be last, and the last shall be first seems a better description of what is involved. But the fact remains that, so far, human civilization shows an unbalanced state, and history. We are not at the end of the story.

1.2 The Eonic Evolution of Civilization

Looking backward, our perception of greater antiquity seen through the lenses of the outcome of the modern transition, in our notation 'ET6++', we see the context of secular modernism as an eonic effect, and we are well into a new period in the 'downfield new aging' of a major transition. In the contemporary time frame the passage to a first global oikoumene is well underway, and the gross imbalance of eonic evolutionary process endures its sluggish globalization.

Once we set up the eonic sequence the resolution of Kant's Challenge is almost instantaneous, we see high correlation with political novelty, with the transitional eras, with the birth of the state in the first transition, and the most spectacular being the double emergentism of democracy, 'ET5, Greece' to 'ET6, Europe'.

'ET6++…: ca. 2000 A.D.

We are immersed in the unfolding structure we are attempting to describe, as the structure of 'modernity', i.e. the V-cone of 'ET6,…',. Our starting point is the current period of the onset

of oikoumene creation, 'ET6++,…', in the wake of 'ET6,…', now proceeding globally in a fashion almost completely reminiscent of the first Sumerian, and later Hellenic, and other, oikoumenes. The Enlightenment prefigures the new era and seeds a universal global culture.

We are just emerging from…

'ET6…': 1500-1800

We see the unmistakable effect of relative beginning, notwithstanding small indications from the period of the late medieval, in the sixteenth century, as the parallel interactive emergence of religious Reformation, Scientific Revolution, pre-capitalist economic transformation, overseas expansion, rising nationalism, and the proliferation of seminal literatures, and the rapid appearance of the early political philosophers such as the seminal Hobbes and Locke at the birth of Liberalism. The trigger areas quickly concentrate on a Northern European fringe area, stretching from Germany through Holland to England, and France...

'ET6+…': ca. 1800

The transition moves toward a characteristic second stage with the appearance of the English Revolution, the real rise of modern science, and the birth of the Enlightenment, really in this seventeenth century, rather than the eighteenth. This is period of the real cascade of modern effects that will drive the system into its climactic period and passage across a divide. The transition is a divide, and the divide, relatively arbitrary therefore, nonetheless shows a very marked near 'scene changing' effect in the aftermath of the French Revolution. The age of Democracy and Steam is attended by such a host of eonic emergents that it is difficult to sort them out. There is no consistent theme, universal name or stage label that we can give to this new age effect as we examine the broad spectrum of eonic emergents. We see the Enlightenment, but we also see Rousseau, and Romanticism. We see the emergence of capitalism, but we also see the collision of liberalism and socialism. The great takeoff is not just a function of economic or other factors, but of

action in the eonic mainline.[1]

It is from this vantage point therefore that we look backwards at the entire phenomenon of civilization, and thence to the Neolithic. The modern example is so complex that we can barely grasp what is happening, since we tend to be ship's mate on one of its emergents.

1. Neolithic Beginnings

Just as we pass the world of the ziggurats and pyramids, at the 'start' of our pattern, we can flashback to the greater dawn of cultural history after the Ice Ages to consider the elements brought to the beginnings of civilization.[2] To start in this period without the experience of the later

1 **Appendix**
R. Lerner & al., *Western Civilizations* (New York: Norton, 1993), Peter Gay, *The Enlightenment* (New York: Norton, 1966), Norman Hampson, *A Cultural History of the Enlightenment* (New York: Pantheon, 1968), Ernst Cassirer, *The Philosophy of the Enlightenment* (Boston: Beacon Press, 1955), Paul Hazard, *The European Mind* (New York: World Pub. Co., 1963), F. Nussbaum, *The Triumph of Science and Reason: 1660-1685* (New York: Harper & Row, 1953), Tom Sorrell (ed.), *The Rise of Modern* Philosophy (Oxford: Clarendon, 1993), Lester Crocker, *Nature and Culture* (Baltimore: John Hopkins, 1963), R.R. Palmer, *The Age of Democratic Revolutions,* Eric Hobsbawm, *The Age of Revolution: 1789-1848* (New York: New American Library, 1962), William Doyle, *Origins of the French Revolution* (New York: Oxford, 1980), Owen Chadwick, *The Secularization of the European Mind in the Nineteenth Century* (New York: Cambridge University Press, 1975), Louis Dumont, *From Mandeville to Marx* (Chicago, 1977), Frank E. Manuel, *Shapes of Philosophic History* (Standford, 1965), David Landes, *The Unbound Prometheus* (New York: Cambridge University Press, 1969), E. Roll, *A History of Economic Thought* (London, 1973) Athol Fitzgibbons, *Adam Smith's System of Liberty Wealth and Virtue* (Oxford: Clarendon, 1995), John Plamenatz, *Man and Society* (London: Longmans, Green, 1973), James Miller, *Rousseau* (New Haven: Yale University Press, 1984), W. H. Weikmeister, *Kant* (Lasalle: Open Court, 1980), David Brion Davis, *The Problem of Slavery in Western Culture* (New York: Oxford, 1966), *Slavery and Human Progress* (1984), Pamela Pillbeam (ed.), *Themes in Modern European History* (London: Routledge, 1995), Ferenc Feher (ed.), *The French Revolution and the Birth of Modernity* (Berkeley: University of California, 1990).

2 *After The Ice: A Global Human History, 20,000 to 5000* (Cambridge: Harvard University Press, 2004), by Steven Mithen, *Ascent of Civilization: The Archaeology of Early Humans* (London: Collins, 1984), by John Gowlett. *Patterns in Prehistory: Humankinds First Three Million Years* (New York: Oxford University Press, 1984), by R.J. Wenke, *Farming in Prehistory* (New York: St. Martin's, 1975), by Barbara Bender, *From Foraging to Agriculture* (Philadelphia: University of Pennsylvannia, 1989), by Donald Henry, James Mellaart, *Earliest Civilizations of the Near East, and Catal Huyuk* (New York: Mcgraw-Hill, 1965), James Mellaart, David Harris, *The Origins and Spread of Agriculture and Pastoralism in Eurasia* (1996), *The Early History of the Ancient Near East 9000-2000 B.C.*(Chicago:

transitions is likely to be confusing, for what we must find is very specific and beyond the resolving power of current archeological data, and it must show correct periodization, without stretching dates. Further, we are liable to make the assumption that the pattern observed in the later eras logically requires an extension of identical structure to the previous periods. There is no *a priori* reason why it should. A long step-up from ca. -8000 or before to a higher take-off plateau of self-organization would seem more logical, but the evidence seems to be emerging for an extension to the cyclical version we see in historical times, starting after the end of the Ice Age. It is very hard to put such a long sequence of religious history in correct perspective. However, we know where to look for frontier effect antecedents to Sumer and right on schedule we find vague intimations of highland sources in the rough period, ca. -5500 to the North of the first visible transition.

> **Invisible transitions?** Reflection on this long Neolithic era in relation to what we see later produces most devastating caution against Darwinian thinking. We are lucky to see 'how religions work', given the transitional data for 'ET5, Israel' for example. Yet such data is mostly absent even here, what to say of the Paleolithic. To generalize without being able to find the suspected invisible transitions would be misleading indeed.

As we look at the nature of our problem overall, and the emerging picture of the Near East from the earliest times, the broad rolls of at least two antecedent eonic cycles begin to become evident, but without the solid data for the transitional intervals themselves. Behind the first visible transition, then, so aptly symbolized by the unification of the Upper and Lower Kingdoms of Egypt under the aegis of Pharaonic theocracy and the emergence of the Sumerian city-states, increasing historical research is beginning to fix for us the emergence of two, perhaps three earlier periods before the point that we egregiously call the emergence of civilization, not the transitions, but broad humps of cultural advance, the 'emergence from ground' in each period, finally leading up to the great breakthrough around -3000, which is then, in fact, no more than the midpoint of organized human community. More conclusively, we catch the Ubaid culture rising from -5500

University of Chicago, 1988), Hans Nissen, *The Old World: Early Man to the Development of Agriculture*, ed. Robert Stigler, The Emergence of Civilization (New York: Routledge, 1990), by Charles Maisels, *The Ancient Near East* (New York: Harcourt Brace, 1971), by W. Hallo and W. Simpson, *Prehistory and the Beginnings of Civilization*, by J. Hawkes and L. Woolley, Charles Redman, *The Rise of Civilization* (San Francisco: W.H. Freeman,1978).

in the period after -5000. This is about the period of the Roman Empire in the later stage six hundred years from a transitional period.

Thus, our examination of the eonic effect begins with Egypt and Sumer, for this is simply when our fulsome data becomes available, and this because of the invention of writing, in the same fashion as an older view of history finds this period to be the 'beginning' of civilization. This should make us suspicious, for our pattern suggests, not the beginning of civilization, but simply the 'next' eonic interval initiated in a broad transition driving two zones that are ready 'over the top'; and this forces us to ask, transitions from what? Let us keep in mind that from -5500 to -3000, from North to Southern Mesopotamia, is a period as long and probably as complex as that between Ancient Israel, the Medieval Cathedrals and the Protestant Reformation, disregarding the tremendous expansion of scale.

? 'ET1,…ET2,…:

> The rough correlation of the onset of the Neolithic in the Levant is unmistakable, as is the appearance of a first 'city' very early in the site of Jericho. The broad correlation is so vague however that we can only wonder at the nature of any transitional phase in such primitive circumstances. This period is too speculative to be included in our full dataset. First, during the period -10000 to -8000, there is the slow passage from earlier nomadic, hunter-gatherer, existence to a mixed mode of proto-agricultural discovery and experimentation. Even this earlier stage is a discovery and a long learning process. And there is a strong suggestion that our 'cultural integration', that is the assembly into community, precedes and induces the Neolithic, rather than the other way around. Groups begin to settle down in communities, the harvesting of the wild grains and the domestication of animals precede the emergence of the Neolithic proper. This is the Natufian period with its traces in the Levant, when the exploration of seminal possibilities of agriculture is emerging.

During the period from -8000 to -5500, we enter the period of the Pre-Pottery Neolithic, visible in the broad focal band of the Levant, Western Asia, then later in the very advanced culture arising in Çatal Hüyük, followed by the full emergence of pottery technologies, and the first beginnings of

copper use, and remarkably, strong suggestions of a religious mode associated with it. It is remarkable that the centuries near -8000 and -5500, occur over and over again in the delineation of many studies. The carbon dating of the first Neolithic levels of Jericho, at which we find evidence of a shrine, are in precisely the right time frame.[3] We must suspect a transition near -8000 starting in the Levant and the higher regions of Mesopotamia, slowly networking outward over the a period of two millennia into Northern Iraq, Egypt, South Europe, Crete, the Indus, creating a new type of Neolithic culture, village life, a characteristic religious mode, that will show lingering signs persisting during the following millennia in the transition of Goddess images that begins with civilization.

? 'ET3,…:

> We see the first instance of the frontier effect in the notable decline in the first area near the Levant, and the surge of a second stage of Neolithic further east in the Hassuna and Halaaf vicinity, and the rapid spread into southern Mesopotamia from this more northern source in the first third of the new period after ca. -5500. We can't quite pinpoint a transitional area, but the broad pattern is there.

In general, over the whole period from ca. -8000, we see one and the same process of social and technological integration, *village, town, city*, to be occurring in sequential rhythm.[4]

We would never claim anything but random slow evolution induced by demographic, climactic or material conditions for the developments of this period, *if we had not the evidence otherwise from the later periods of cultural evolution.* Even at the later stages when maturing historical awareness, and a more explicit creativity, effect the rate of change, we find the great periods of cultural foundation during the transitions. How much more likely this should be for the dispersed elements of hunter-gatherers groping during the early period moving toward the first techniques of agricultural existence.

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3 James Mellaart, "The Beginning of Village and Urban Life" in *The Dawn of Civilization* (New York: Dawn of Civilization, 1961), p.55, Jacquetta Hawkes, in *History of Mankind*, p. 222. Cf. Also, K. Kenyon, *Digging up Jericho,* J. Mellaart, *Earliest Civilizations of the Near East*, H. Nissen, *The Early History of the Ancient Near East.*

4 For a discussion of the term 'civilization' in relation to the sequence 'village, town, city', cf. Sir Leonard Woolley, "The Beginnings of Civilization", p. 359, in *History of Mankind*, Volume I , Part II., 1963.

It is interesting to consider the evidence of earlier eonic structure from the indications of a mideonic plateau effect. As James Mellaart notes, in a description that almost implicitly maps out the period ET3++:

> At the end of the Early Chalcolithic period, then, let us say ca. 5000 BC., we find that throughout the greater part of the Near East all the requirements for the birth of civilization were present... Nevertheless, the expected birth of civilization did not take place. It was delayed for nearly another millennium and a half and when it did come it was not in the areas which had hitherto been most prominent, but in the dismally flat lands of S. Iraq and a little later in Egypt, areas which until then had been of little or no importance. Why was this so? [5]

Does this sound familiar? Once again we see an arrest after the sudden burst of change, the eonic falloff and downturn, given an interesting interpretation by Childe, with a clear suggestion of a two-step rise to civilization. The real beginning of civilization then would seem to be as well the emerging Ubaid culture springing from a likely transition to the North of the next zone of advance in the South, Sumer.

2. Egypt, Sumer, and the Rise of Civilization

We begin *in medias res* with the Sumerian city-states and the founding of the great dynasties of the Pharaohs, the millennia since the Ice Ages behind us, and no detailed evidence for what we must at once suspect is only the midpoint of this history, starting at the point where we see the first eonic transition majestically evident in Egypt and Sumer, after ca. -3300, with probably the same false equivocation as elsewhere over -3600 to -3300.[6] We

5 *Dawn of Civilization* (New York: F. Ungar Pub Co, 1968), Stuart Piggott, p. 62.

6 H. J. Nissen, *The Early History of the Ancient Near East* (Chicago: University of Chicago, 1988) , Chapter 4, "The Period of Early High Civilization (ca. 3200—2800 B.C.), Harriet Crawford, *Sumer and Sumerians* (New York: Cambridge University Press, 1991), Chapter 2, " History Chronology , and Social Organization", J.N. Postgate, *Early Mesopotamia* (New York: Routledge, 1992), Chapter 2-3, "Cities and Dynasties", "The Written Record", George Roux, *Ancient Iraq* (New York: penguin, 1992), Chapter 4, "From Village to City"; for Egypt, see especially Michael Hoffman, *Egypt Before the Pharaohs* (New York: Knopf, 1979), Chapters 19-20, "In Search of Menes", "The Emergence of Egypt", Michael Rice, *Egypt's Making* (New York: Routledge, 1990), *Egypt's Legacy* (New York; Routledge,

come to the great beginning of the civilizational sequence, in reality, more like 'step 2 or 3'. Sumer is in the 'mainline' like later Israel and, perhaps, Greece, while Egypt springs up in parallel like 'ET5, China'.

'ET4, Sumer,…, Egypt':

> This is the first preeminent case of parallel interacting emergence, with considerable evidence of Sumerian influences at the point of take-off. Egypt and Sumer are taken however as independent emergents during phase, with possibly a strong interaction between them, almost as though Egypt were also sequentially dependent on Sumer. During this first transition, the first urban scale of human settlement, theocratic kingship, the technological organization of agriculture, the embryonic gestation of industrialism, writing, bookkeeping and the maintenance of records, a religious 're-formation' or theocratic neo-formation (and hints of a brief primitive democracy), a managerial revolution with a scribal technocracy, and an information economy, all make their first glorious appearance, as does the first emergence of the dilemmas of hierarchical society, the disposition of the agricultural surplus becoming the determinant of social structure.

Leonard Woolley, attempting to find a Sumerian source behind Egyptian civilization, says of the Egyptian period of this transition that it is "not so complete as to amount to a breach of continuity but enough to mark an epoch; the changes are coming in towards the end of the Predynastic period and by the time of 'Menes' we have what is virtually a new culture."[7]

1997), Chapter 3, "The Lords of the Two Lands", Walter Emery, *Archaic Egypt* (New York: Penguin, 1961), Chapter 1, "The Unification", Nicolas Grimal, *A History of Ancient Egypt* (Cambridge: Blackwell, 1988), Chapter 3, "The Thinite Period", Karl Butzer, *Early Hydraulic Civilization in Egypt* (Chicago: University of Chicago, 1976), Ronald Cohen & Elman Service, *The Origins of the State* (New York: Norton, 1978), "The Ancient Near East", H. Frankfort, in *Orientalism and History* (1954), Sir Leonard Woolley *History of Mankind* (1965), Vol I, Part 2, "The Beginnings of Civilization", Wilbur Jones, *Venus and Sothis* (1982), Stephen Sanderson, *Civilizations and World Systems* (Walnut Creek: Ca: Altamira Press, 1995). William Hallo, *Origins* (New York; Brill, 1996). *The Uruk World System: The Dynamics of Expansion of Early Mesopotamian Civilization* (Chicago: University of Chicago, 1993), Charles Freeman, *Egypt, Greece and Rome* (New York: Oxford, 1991), Donald Redford, *Egypt, Canaan, and Israel in Ancient Times* (Princeton: Princeton University Press, 1992.

7 Leonard Woolley, *The Sumerians* (Oxford: Clarendon Press, 1928). Walter Emery notes: "At a period approximately 3400 years before Christ, a great change took place in Egypt, and the country passed rapidly from a state of Neolithic culture with a complex

> **Dynasty 0** This period of transition produces the perfect symbolism of the emergent state in the Palette of Narmer. "The Naqada III phase c. 3200-3000 is the last phase of the Predynastic period… It was during this period that Egypt was first unified into a large territorial state…"[8]

The sudden intensification of the late Uruk and the climax of the unification of Upper and Lower Egypt in the first Dynasty of the Pharaohs are tokens of the crucial period, followed by the emergence of the characteristic and classic forms and achievements of the Sumerian dynastic period and the Old Kingdom of the Pyramid builders.

Our model has recast the issue of 'civilizations' in terms of divides, phases, sequential dependency, and diffusion throughout oikoumenes. Instead of evolving civilization, we see an eonic sequence overlaid on these civilizations, as the transition creates a cone of diffusion. And it is here in the wake of Egypt and Sumer that we see the first great (double) oikoumene of antiquity take shape. These two, especially Sumer, will create the first great 'modernism' of world history, the point at which so much that we consider basic to our own forms of complex social existence came into being. The whole Toynbean confusion of searching for civilizations disappears, as the secondary constructs, e.g. Indus, arise in the mode of sequential dependency. By definition, only the phase is 'on time', the 'initial conditions' of mideonic civilization are contingent. If we cannot claim this effect of diffusion, our model is false. Our analysis sends out a challenge, to find exceptions to this sequential dependency effect in everything that arises after -3000 until the next phase after -1200. The only possible candidate, to the author, would be the New World civilizations. As to the New World we must either find, therefore, mideonic diffusion before 'ET5', or postulate the birth of a new V-cone.

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tribal character to one of well-organized monarchy…At the same time the art of writing appears, monumental architecture and the arts and crafts develop to an astonishing degree, and all the evidence points to the existence of luxurious civilization. All this was achieved within a comparatively short period of time for there appears to be little or no background to these fundamental developments in writing and architecture." W. Emery, *Archaic Egypt* (NY: Penguin, 1962), p.192.

8 Ian Shaw (ed.), *The Oxford History of Ancient Egypt* (New York: Oxford University Press).

3. The Axial Interval

We arrive once again at the onset of the 'classical' period, 'ET5', with a better perspective on the overall context of this parallel surge of advance, whose eonic structure is now seen to be almost identical with what has occurred in the case of Egypt and Sumer, in the sense of parallel interactive emergence. Suddenly five dispersed sources move against the trend of the long-term, and in the process regenerate a new constellation of civilizations. We see a complex cultural 'economy': it is one field of diffusion, and yet this field is moving as one into separate realizations, in a pattern independent parallel emergence.

In each transitional area, we see the characteristic stream and sequence effect: the Shang leads into the Chou, thence to the classical creative age of China. The Indus, a clear mideonic acorn in the field of Sumer, disappears as a civilization well before the next era, and becomes a field blended with the arrival of the Vedic Aryans, the cousins of the Persians, whose cultural and religious forms will give the misleading appearance to later times of being the source of the ancient explorations of consciousness that will suddenly flower in the transitional age of the Upanishads. We cannot forget that the Persian t-stream entry contributes the most basic religious innovation in the form of its Zoroastrian theme, as this becomes a part of the Judaic manifestation, as this emerges in the most extraordinary of the classical transitions, whose effect, like Buddhism, dares the future without the instruments of state.

The collision and stubborn conservatism of outstanding 'state constructs', such as the Assyrians, seems to drive innovation to the boundary areas. As we contrast the Assyrians in transition with the Greeks in light of this view, we get a strange sense of *déjà vu,* and see the process in a nutshell, with a sense also that the mixture of phases in the old Mesopotamian world cannot truly regenerate itself. Thus there is a strong connection between our transition in Sumer and Greece, in terms of these city-states.

The Indian sequence seems to show Buddhism emerging from Vedism or Hinduism. But this is a false picture, a later layer of tradition. Later, we see the jackknife-splitting of the sources both in India and in the West. In India, the long reaction against early sources and the appearance of Hinduism in its late forms after the disappearance of Buddhism is a piece of history that makes sense only in an eonic interpretation.

Other theories of civilization attempt to find the civilization in the kingdom. In the case of Israel, we find an eonic generator emerging from a vanishing kingdom, and a people proceeding outward with no kingdom but with a legal code. During the period of the Exile, the kingdom vanishes (and the myth of the Exodus comes into existence). Bent like a pretzel the result is essentially double, a type of religious nationalism, and the seeds of the oikoumene generator that will be spawned, in a fashion even this analysis finds elusive.

'ET5, …' :

The onset of phase casts its net across the whole field of Eurasia as if to balance a new stage of advance as widely as possible across its sequential dependencies, to be followed by the obviously concentrated follow-up from a single source, during the next phase to come. Our three hundred year transition is open to some ambiguity, as in the modern case. After -1200, the faintest indications of the new dawn begin. But it is in reality the last two or three centuries before -600 that are crucial.

'ET5+, …' : This would be the rough period of the 'divide', and we see the sudden convulsion in Israel, right on schedule as the system starts to generate its exteriorization. The period of Solon in Greece and emergent Buddhism in India would be comparable.

'ET5++, …' : This classical phase especially shows the spectacular emergence of a bouquet of multiple oikoumenes, from China to the West, as separate yet intersecting cones of diffusion that fall short of global closure.

This second phase ignites areas that are ready or can respond in the field of sequential dependency stretching across Eurasia.

'ET5, Assyria, Persia, … Israel, …' :

As George Roux notes in *Ancient Iraq*, "Assyria awoke in 911 B.C," referring to the recovery after the time of confusion in the Middle East created by the movements of peoples, Semitic and Indo-European, and generally the breakdown of the whole system created in the cones of diffusion of Sumer and Egypt. As

> Roux notes further, "When the light against comes in about 900 B.C.," Western Asia has a new substrate of Aramean culture, the Philistines share Canaan with the Israelites, the Phoenicians enter a period of prosperity, the Medes and the Persians are entering the stage, ready to burst into the old oikoumene after the sudden precipitous fall of the Assyrians in -612. We would be hard put, at first, to find signs of anything in the way of evidence of transition too near the older area, but we can see from the distillation of the Old Testament one unwitting record of how one group of the participants experienced it, and saw the extraordinary changes that were taking place, and found themselves attempt to divinize the law of historical change.

It is interesting that the Assyrians made an effort to preserve the ancient tradition of Mesopotamia in the building of great libraries. The tradition is thus frozen in place, and much of what we know about the earlier period is in fact derived from this Assyrian record.[9]

'ET5, …Israel…':

> We should expect great changes from great forces. But here in the study of the eonic effect we see in the Canaanite 'Israel' (Israel/Judah) the issue of great changes from point sources. Israel will serve as a vehicle of diffusion for a transformed version of the ancient tradition, in the emergence of monotheism and eschatology, evident in the bobbing to the surface of the underground stream in the Book of Daniel, and the final Qumranic, and Christological, injection of the theme into the great oikoumene construction, of which the Judaic, in the Mediterranean world, is the counterpoint to the Roman.

The Israelite transition is confusing, but the symbolism speaks for itself, as a kingdom disappears, the essence of a kingdom spreads into the new oikoumene, complete with a legal code, celestial courts of law, but no government, and a state abstraction, 'israel'. The transition that produced monotheism does not show a monotheistic society, until after the Exile as far as can be seen. A close consideration of and placement beside the Greek transition will suggest that it is the crucial period from -900 to -600 that is

9 J. Cooke, *The Persian Empire* (London: J.M. Dent, 1983), Hermann Bengston, *The Greeks and the Persians* (New York: Delacorte, 1965).

the sudden discontinuous source, and enough time for the full launching and remorphing of the prior Israelite-Canaanite stream.[10]

'ET5,…Greece,…':

> Emerging from the period of its Dark Ages into which it had passed after the collapse of the Mycenaean world, the great transition of the Greeks, in many ways a premonition of our own 'modernity', moves very quickly to establish the foundations of philosophy, science, new forms of political organization, the tragic drama, and a resplendent art.

The entire transition is clocked by the change in pottery styles, beginning with the austere geometric style ca. -900, followed by the sudden elaboration and flowering, from the eighth century, of the classic styles that run in parallel with full period of transition. The first date, -776, for the Olympic Games, indicates the beginning of the visible effects emerging of the acceleration. The reappearance of writing and the works of Homer by the middle of the century remind us, that even as overseas colonization and an economic Boom get underway, the effects of information technology are as fundamental, and that art at the highest level seems to precede all other manifestations.

That a portion of our transitional period is hiding behind this label called 'The Dark Ages' is evident by comparison with its parallel cousins, and by the sudden appearance of the many fully developed cultural forms in the eighth century, such as the *Iliad*, as if without any development at all. The history of Greece is invaluable because it shows two separate civilizations

10 N. P. Lemche, *Ancient Israel, A New History of Israelite Society* (Sheffield, England: JSOT Press, 1988), John Hayes et al. (ed.), *Israelite and Judaean History* (Philadelphia: Westminster, 1977), J. Alberto Soggin's *A History of Ancient Israel* (Philadelphia: Westminster, 1985), M. S. Smith, *The Early History of God, Yahweh and other Deities in Ancient Israel* (New York: Harper & Row, 1987), Morton Smith, *Palestinian Parties and Politics that Shaped the Old Testament* (New York: Columbia, 1971), Bertil Albrektson, *History and the Gods* (1967), Giovanni Garbini, *History and Ideology in Ancient Israel* (London: SCM, 1988), Marc Brettler, *The Creation of History in Ancient Israel* (1995), H. Saggs, *The Encounter with the Divine in Mesopotamia and Israel* (London: Athlone, 1978), Robert Coote, *Early Israel, A New Horizon* (Minneapolis: Fortress Press, 1990), John Van Seters, *In Search of History* (New Haven: Yale University Press, 1983), Aberbach David, *Imperialism and Biblical Prophecy 750-500* (New York: Routledge, 1993), Bernhard Lang, *Monotheism and the Prophetic Minority* (Sheffield, UK: Almond, 1983), Ahlstrom, Gosta, *The History of Ancient Palestine* (Sheffield: Sheffield Academic Press, 1993), Albright, William, *The Archeology of Palestine*, New York: Penguin, 1960, James Pritchard, *The Ancient Near East* (Princeton: Princeton University Press, 1958).

built from the same stream, one in the sequential state of the Mycenaean medievalism, and the interaction with the e-sequence, the classical Greece that we know. The sequence, Mycenaean, Archaic/Classical, Hellenistic, dramatizes the nature of one of he most extraordinary form of periodic motion in nature.

Between 750 and 650, we see the end of the period that produced the *Iliad,* the rebirth of literate culture and the new literature that will exploit it, beginning with Hesiod, and then the seminal Archilochus. This is one of the most rapid periods of cultural evolution in history, and we can see, if only by hypothesis, that it is a global system transformation in the next phase of oikoumene generation. After -600, and the generation of Solon, the foundations are laid for the great sequences of the Classical era, in sculpture, architecture, philosophy, and politics. By -400 the falloff is evident and the world of the polis passes into the era of the first oikoumene, the Hellenistic empire of Alexander. The world of the *polis* does not lead so happily to the world of Cosmopolis. The Greek transition is evanescent, and soon bends out of shape.[11]

'ET5++': Athens to Rome

The history of Rome has for long been the victim of delegation to secondary status in relation to the Greece. Our outline gives a complete account of this fact, even as it moves to relieve the Roman unfoldment to some relief of this peculiar status. For the Roman emergence, zoned with the Etruscan, is ambiguous in our account in the sense that it is clear an independent parallel

11 Chester G. Starr, *The Origins of Greek Civilization*, 1100-650 B.C. (New York: Norton, 1991), *The Awakening of the Greek Historical Spirit* (New York: Knopf, 1968), *The Economic and Social Growth of Early Greece* (Oxford: Oxford, 1977), Anthony Snodgrass, *Archaic Greece, The Age of Experiment* (Berkeley: University Of California, 1980), *The Dark Age of Greece* (1971), R.J. Hooper, *The Early Greeks* (1976), Oswyn Murray, *Early Greece* (Cambridge: Harvard, 1993), M.I. Finley, *Early Greece: The Bronze and Archaic Age* (New York: Norton, 1981), *The World of Odysseus* (1962), W.G. Forrest, *The Emergence of Greek Democracy* (New York: McGraw-Hill, 1966), Pavel Oliva, *The Birth of Greek Civilization* (London: Orbis, 1981), A.R. Burns, *The Lyric Age of Greece* (New York: St. Martin's, 1960), William Biers, *The Archeology of Greece* (Ithaca: Cornell, 1980). Donald Kagan, in *Pericles of Athens and the Birth of Democracy* (New York: The Free Press, 1991), Herman Frankel, *Early Greek Poetry and Philosophy* (New York: Harcourt-Brace, 1962), Christian Meier, *The Greek Discovery of Politics* (Cambridge: Harvard, 1990), Jennifer Roberts, *Athens on Trial* (Princeton: Princeton University Press, 1994), Walter Burckert, *The Orientalizing Revolution* (Cambridge: Harvard, 1992)

emergent in relation to 'ET5', and yet also, a fluid transformation of the 'sequential dependencies' of the Hellenic Mediterranean network of diffusion, the 'Greeks overseas' to use the phrase of the book by John Boardman. Nothing in our approach forbids this double aspect. Roman mythology clearly echoes its early transitional generation, whatever we are to conclude, in its account of the passage to a republic from the era of kingship.

'ET5, …India,…':

The Indian transition is plainly visible from a distance in the contrast and sequence of the Vedic, Upanishadic, followed by the emergent Jainism and Buddhism and parallel proto-Hinduism, followed by the typical integration phase of Ashoka, in another variant of religion and empire, and the clear emergence of the gesture toward oikoumene. Buddhism and Jainism are in the realization period, 'ET5+', analogous to Judaism in the wake of the prophetic era. The different character of Buddhism, for example, is always noted as odd but never quite accounted for. This is one and the same 'master key' sequence seen in the Occidental Israelite/ Judaic sequence.

It is fascinating to compare the two, for the Buddhist glove slipped off the larger Indian t-stream by the time of the Gupta age. That later 'Hinduism' is a complex resurgence of entry t-stream absorbing the transitional shockwave as a complex flow around makes the correct interpretation of the outstanding traditions somewhat confusing. The exact cultural interpretation of the *Bhagavad Gita* alone is comparable with the difficulties of the Occidental religious texts. The stream and sequence data for the Indian transition must take into account the double stream of the earlier Dravidian mixing with the Aryan entry field, and its blending and transposition of the spiritual that appears to emerge from the polytheistic world of Vedism. This preoccupation with religion must not let us forget that the Indian transition is a broad cultural matrix not so dissimilar from the Greek as a system of small kingdoms, an economic and political sequence, and the typical 'empire integration' in the last phase. [12]

12 A.L. Basham, *The Wonder that was India* (New York: Hawthorn, 1967), E. J. Rapson (ed.), *The Cambridge History of India* (1922), Romila Thapar, *A History of India* (Baltimore: Penguin, 1966), Vincent Smith, *The Oxford History of India* (1981), D.D. Kosambi, *Ancient India, A History of its Culture and Civilization* (New York: Random House, 1965), R.C.

'ET5, China,…':

> At about the time of the institution of the Greek Olympic Games in -776, we enter the period of 550 years from -771 to -221, the Eastern Chou period, when a phenomenon resembling that of the Greek polis creates political turbulence, the inability of any one state to control China, and a period of ferment in which the gestation of the great Chinese civilization takes place. This whole period is often subdivided into a Spring and Autumn period (-722 to -481) and a Warring States period (-403 to -221).

The Chinese transitional period is of especial interest because of its 'Greeks of the East' theme and variations, its distance from the conventional 'cradle of civilization' in the Near East, the distinct character of its creative yet diffusionist beginnings in the early Shang period, and its rapid movement from these 'primitive' Shang beginnings to advanced civilization after a first period of eonic transition, like a student skipping a grade in school, and yet moving swiftly to make up the difference. The result is almost a kind of compression together of the most advanced forms of culture with a context that almost betrays traces of a more antiquated 'oriental despotism', with its elusive common denominator that shows its beguiling family resemblance to what occurs in the West. It is, incidentally, this possibility that two stages of growth can be blended that makes a refutation of most labeled conceptual sequences of evolutionary development and shows why the 'eonic sequencing' of 'empty' progressive cycles is the only solution to broad parallel development.[13]

Mujumdar, *History and Culture of the Indian People* (1951), Paul Masson-Oursel, *Ancient India and Indian Civilization* (1967), Paul Deussen, *The Philosophy of the Upanishads* (1966) N.K. Sidhanta, *The Heroic Age of India* (New York: Oriental Books Reprint, 1975), contains an interesting cross history of the Indian and Greek epic traditions. Joseph Elder, *Lectures on Indian Civilization* (Madison: University of Wisconsin, 1970), Phulgenda Sinha, *The Gita As it Was, Rediscovering the Original Bhagavadgita* (Lasalle: Open Court, 1987), and Prem Nath Bazaz, *The Role of the Bhagavad Gita in Indian History* (New Delhi: Sterling, 1975)

13 Kwang-chih Chang, *The Archaeology of Ancient China* (New Haven: Yale, 1977), Joseph Needham, *Science and Civilization in China* (Cambridge: Cambridge, 1965), Fung Yu-Lan, *A Short History of Chinese Philosophy* (NY: The Free Press, 1966), V. Rubin, *Individual and State in Ancient China* (NY: Columbia, 1976), Benjamin Schwarz, *The World of Thought in Ancient China* (Cambridge: Harvard, 1985), H.G. Creel, *The Origins of Statecraft in China* (Chicago: Chicago, 1970), *The Birth of China* (NY: F. Ungar, 1954), Donald Munro, *The Concept of Man in Early China* (Stanford: Stanford, 1969), Frederick Mote, *Intellectual Foundations of China* (NY: Knopf, 1971.

4. The Modern Transition

We are back at our starting point in the frontier zone of the Eurasian system. We see the clear 'jump-start' effect in the generation of Machiavelli and the explosion of the Reformation. From this point onwards, the acceleration is pronounced and unflagging until the beginning of the nineteenth century, and generates a revolutionary turbulence, from which emerges the new industrial society we call 'modern'.

As in the ancient world, the first changes hug the proximity of the earlier age, visible as the (late) Italian Renaissance, and then appear in the outlying areas, moving in south/north direction. The clear appearance of focal intensity in a Northern band of Germany, France, Netherlands, England, is exactly to be expected, and passes immediately to the New World as a great extension of the effect. The overseas expansion and global connection, nationalism and new forms of warfare, the onset of early industrial transformation with a price revolution, a demographic surge, the scientific renewal, the first phases of social revolution, the Reformation as a religious evolutionary transform or 're-formation', the crystallization of the early forms of a new tradition in the rapid appearance of national literatures climax in the passage from a first to a second stage in the seventeenth century. Here in many ways we see the character of the changes begin to reveal the results of their random stirrings in the beginnings of *human* direction to the transformation: the beginning of the Enlightenment, the real Scientific Revolution, and the generation of the new forms of economy, culture and economy that will initiate a new pattern of world history in the passage through the cauldron of revolution and industrialization. Instead of the 'rise of the West' we now have:

> **'ET6,…Atlantic sector : Western Eurasia,…':** After the onset of the Reformation in the sixteenth, the transformation clearly begins to show its truly new character from the middle of the seventeenth century, as if what came before were nothing more than the breaking of ground. The Reformation begins to yield to the Enlightenment, the age of Copernicus to the age of Newton, the forms of governance stir in the English Revolution to generate the forms of the new liberalism, with a 'socialism' hiding behind it, and quite underpowered. The final piece of the new world is rapidly taking form before the onset of industrialism in an earthquake of

democratic revolution, globalization, and economic expansion.[14]

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