





Inseminate Architecture:

An Archontological Reading of
Athanasius Kircher's *Turris Babel*



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fulfillment of the requirements for the degree of Master of Architecture

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Master's of Architecture Thesis

Short Title: "Inseminate Architecture:
Athanasius Kircher's lunus Babel"

Abstract:

Among the vast assembly of Biblical mythology, the tower of Babel stands as an exclusive representation of the limits of human endeavor. As a paradigmatic extremity, it circumscribes the field of civic artifice. Babel is the *absolute* limit, and in that regard, its presence is enduring and timeless. The legacy of exegetic readings are textual shades, emanating from the point source of the paradigm. Athanasius Kircher's *Turris Babel* is an appropriate and intentional unfolding of this condition.

Firstly, that in the awakening of the Baroque scholar to history, origin materializes as the sole legitimate chronological reference.

Secondly, that the paradigmatic extremities collapse into the empirical standard of the theoretical discourse.

This thesis is a speculative study of architecture, drawn through, *Turris Babel*, in the shadow of the paradigmatic limits of Babel. Written in three parts, each dealing with the implications of artifice in confrontation with the post-Babel adversaries of dispersion, tyranny, and decay.

Parmi le vaste rassemblement de la mythologie biblique, la Tour de Babel prône une représentation exclusive des limites de l'entreprise humaine qui, due à son extrémité paradigmatique, a circonscrit le champ de l'artifice civique. Babel est la limite absolue et, dans cette perspective, sa présence est durable et éternelle. L'héritage des lectures exégétiques ne sont que des ombrages textuels émanant des sources paradigmatique. *Turris Babel* d'Athanasius Kircher est un dévoilement approprié et intentionnel de ces conditions.

Quand l'académicien Baroque se réveille à l'Histoire, l'origine ne devient alors qu'une référence chronologique. Les extrémités paradigmatiques s'écroulent pour devenir un standard empirique du discours théorique.

Cette thèse est une étude spéculative de l'architecture à l'ombre des limites paradigmatiques de Babel à travers Kircher. Ecrite en trois parties, chacune d'entre elles explore les implications d'un artifice post-Babel dans des domaines de la dispersion, la tyrannie, et la détérioration.

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Introduction

There was a time when all the world spoke a single language and used the same words

As people journeyed in the east, they came upon a plain in the land of Shinar and settled there

They said to one another, *Come, let us make bricks and bake them hard*, they used bricks for stone and bitumen for mortar

Then they said, *Let us build ourselves a city and a tower with its top in the heavens and make a name for ourselves, or we shall be dispersed over the face of the earth*

The lord came down to see the city and the tower which they had built, and he said, *Here they are, one people with a single language, and now they have started to do this, from now on nothing they have a mind to do will be beyond their reach*

Come, let us go down there and confuse their language so that they will not understand what they say to one another

So the lord dispersed them from there all over the earth and they left off building the city

That is why it is called Babel, because there the lord made a babble of the language of the whole world

It was from that place the lord scattered people over the face of the earth

The Tower of Babel. King James Version.

We are condemned to history. In pursuit of the definition of the present self, we inevitably find ourselves forced to look in both directions beyond the contemporary. We are condemned in the sense that our thinking is fed by an ideology of chronological *truth*. Hence the emancipation and resolution of the crisis of the present is, at best, within the limits of chronological prophesy. Our cultural being is restricted to the provisional, and for that we have designed our world to live provisionally.

One could say that our entire cultural project is incarcerated in the prison of Babel, or rather, it emanates from its ruins. For ever since that episode, our philosophical mandate has been specific to the preclusion of its after effects. The result is a forboding sense that we will always be on the verge of being swallowed into the irreversible inertia towards the absolute consumption of time. The legacy of Babel, then, leaves us with an adversarial reading of ordinance in the human project, we build nations *against* the dispersion, we create law and diplomacy *against* the confusion, and we, the architects, build monuments and cities *against* the deterioration.

"let the performance of my hands endure forever"

Artifice

These adversaries define the on going task of the architect: the artifice. Yet in their acknowledged transgression of the limitations of nature, they are inescapably conditions of being human. Regardless of the crime, architecture is a necessary evil. But it is in its reconciliation with the broken limit that it discovers its true artistry of redemption. At the extremities of the paradigmatic frontier, artifice is a confrontation, between the limits, however, in the day to day lived world, the articulation of its redemption makes it a practice of *coexistence*.

Artifice refers first to the production of the *artificial*, ranging from the smallest gesture of natural substitution, to the the robotic apogee of the simulacra. Indeed from traditional evidence one could read that the artificer is even concerned with the replication of life itself.

But equally important, artifice must be recognized as an obstruction of time. More than simply resisting deterioration, it delays the inevitability of nature by infiltrating mechanisms of postponement into the course of its resolution. Hence, water works, postpones the resolution of a river's flow, architecture, postpones the resolution of gravity, lineage postpones the death of the patriarch. The artificer is held responsible to the the limits of the ontological and physical worlds. Ideas cannot be merely introduced out of nowhere, they must be slipped into the realm of the world, derived from it, and sympathetic to it if not at the minor scale of ecosystem, then at the larger scale of the paradigmatic. In all cases, human artifice is an intrusion that only settles into the entropic closure of the world upon some form of cultural reconciliation with it.

Limits

In both traditional and contemporary interpretations, the Tower of Babel is seen as a paradigm somewhat exclusive of other Biblical episodes. The interpretation of this theme is a dilemma for architecture, for it is placed at, and is concerned with, the very *limit* of possible human endeavors, ie the extremity of the aforementioned *artifice*. Its resolution is only ostensible within the milieu of paradigmatic time. By the very nature of its absurdity, it becomes just as viable as the apocalypse itself, an extremity that can only be located at the end of projected thought.

But what happens when we ourselves, as participants in the modern dilemma, begin to reflect on the farthest limits of speculation? These reflections wind up being so metaphysical that they have come to be regarded mathematical obscenities. Even so, the idea of finality cannot even be *scientifically* grasped without the container of its accomplice subordinates. On its own, ∞ is nothing but that itself. No matter how hard we try to speculate, we cannot see the limit from its other side. Perhaps, as a result of this dilemma, traditional culture would have found the ideal -Heaven, or whatever we choose to call it- on the other side of their version of the above figure, the horizon. For some reason, we continue to invest implicit relevance into the extremities such as infinity. And yet if we still have the ability to deal with the articulation of this limit today (an extremity which in itself suggests the end of metaphysics), the potential of dealing with a paradigm, such as the Tower of Babel seems somehow more promising. Possibly not within our present dialectic, but in one to come.

Interpreting Extremities

That the paradigm of extremity seems to emerge in the articulation of specific moments of cultural history, such as our own, is not accidental. Critical epoches, such as the 17th century are not necessarily gratuitous in articulating cultural upheaval using the themes of apocalypse and *end*. Rather, they carry in themselves the intentionality of a paradigmatic discourse. To say that the world is merely *described* by Babel is not quite enough, for there is no perception of an ideological framework of chronological history to provide the basis for such relativism. One must understand, consequently, that in an age where the evidence of this biblical episode seemed suspiciously present, the only recourse for its comprehension was in the belief that it was self fulfilling. Hence, in the Baroque Babel consistently appears as the symbolic weapon of choice in the dealing critiques of Protestant and Catholic commentaries. On the other hand, the interpretation offered by most contemporary art historians and students of iconography, in identifying the Tower of Babel as a utilitarian metaphor of political critique, is mistaken. It is not so much a question of who to blame for the impending cataclysm, but the reconciliatory understanding of a human nature, that is at this particular point rendered explicit. The redemption is that where there is also a fear of Babel, there is anticipation for the arrival of the Heavenly city. This is not simply an acknowledgement of the dichotomy within

desire. Rather it is the razor thin border defining the consequences of free will and it is the place that is the domain of the cultural artificer.

Turris Babel

Rather than being a specific manifesto of a cataclysmic change in world view, *Turris Babel* is only *evidence* of the gradual struggle of thinking since Plato. It is but one of an infinity of hinges linking distinctive historical regions of the traditional world with the stream of becoming that ultimately feeds into the present. A hinge, because it serves as a retrospective juncture, hidden within the intention of creating a *work* rather than an ideological declaration. It is indeed in the legacy of works like *Turris Babel* that the fruit of living in the perennial shadow of paradigmatic extremes becomes apparent. All work is ultimately *evidence* of struggle, but more importantly, a struggle of reconciliation. It is the contradiction of being human in the face of the ideal that demands the participation of culture in the redemptive articulations of art, literature, philosophy, music and architecture. More than just evidence then, the hinge is in fact the lifeblood of our cultural being.

The kernel of the work is obviously the Tower of Babel. But in looking through the Baroque text we are limited only to a refraction of the Tower's original meaning. This is nevertheless entirely consistent with Kircher's acceptance of the paradigmatic origin as an inaccessible extremity. Inaccessible indeed, however manifest as a generational projection onto the surface of the contemporary page. In a sense, it is a document more telling of the Baroque world than of the original paradigm itself. For it is in the admission to the metaphysical otherness of the monad, like the paradigm itself, that the bonds to symbolic protocol are broken and a euphoria of imaginative speculation is released.

The Thesis

In the daunting and perennial labor of this enterprise, we are forever dreaming of recapturing ideals once lost. Like the audience of a Baroque tragedy, history only provokes a retrospective keening for the idealized origin and the perfected future.

In light of this malaise, a superficial diagnosis would call for the facile solution of total historical subversion. But in order to achieve that, we would be condemning ourselves to the subversion of our very own mechanisms of survival,

while at the same time importing the words of modern oppression into an unsuspecting past. It is within this paradox, consequently, that the hermeneutic strategy attempts to emerge from beyond the chains of historical relativism.

This current work is therefore intended as a dialectical play between the orphaned artifact, *Turris Babel*, and the contemporary field. It is through the layers of documentation, vis a vis the Hebrew text, the poems of Salluste, the paintings of Bruegel, and finally *Turris Babel* itself, that the origin projects itself into the present. This study is particularly concerned with the Baroque *discovery*, and the ensuing collapse of history. Objectified as chronology, history in its emerging significance will be at the service of the *propagandist*, and their speculations. It is in the artistic boldness of the *propagandist* that historical regions are collapsed into the same field for the sake of what seems like a chronological truth.

Turris Babel thus becomes a remarkable document. Firstly, because it indeed objectifies history into chronology, but in the case of Babel, a paradigmatic one. Secondly, it marks the Baroque consciousness and incorporation of the *Hebraic* conception of nationhood and history. Indeed the Baroque was known to have been a era of cultural parasites who fearlessly appropriated the customs and mannerism of every foreign community in the name of Christian homogeneity. And thirdly, because, like this work, it was intended as speculation, derived from a *composite* drawing of the collapsed (temporal) entity of the Tower of Babel.

This speculative reading is two-fold.

Like *Turris Babel*, it will be a study of extremities – a speculative definition of living in the dialectical paradox of first and last, and its entropic reconciliation/subversion by the auspices of artifice. From the external parenthesis of the world, the limits delineate the universe of the city and define the monumental task of the architect (from agriculture to nobility) so as to insure its closure.

Furthermore, it is an attempt to reaffirm the conciliatory task of architecture by revealing the common assumptions that limit the role of the architect as unbalanced and positivistic constructs of selective memory, in effect, as hindering responsible and full participation of architecture within the cultural project.

Kircher introduces *Turris Babel* as an *Archontology*. Although there is no appropriate corollary in the English language, its implied definition is crucial to understanding the intentions of the work. We may extrude it from the fragment of its etymological origins:

Λογία The science or the research of

Οντο, The reality of past and future

Αρχε Origin but also, the beginning, or first, the corner of a sheet, and the beginnings of empire

Αρχων, A ruler, captain, or chief in the sequence of rulers, a power or ruler subordinate to a deity

By definition, then, the work implies more than an exegetic excursion through Babel. It implies rather an archaeological exploration into the beginnings of ontology, but ontology as manifest and ruled in the chronology of monarchy from Noah the paradigmatic ruler to Leopold I of the Hapsburgs. Thus in addition to considering the architectural concerns of *Turris Babel*, the inquiry is broadened to include the sequence of generations that constructed the tower, and eventually ruled the cities of the world. It becomes evident, consequently that the limit emerging from the Babel episode encompasses the larger body of the paradigmatic city, or rather, the two cities: the *City of Man* and the *City of God*. From this Kircher extrudes a tripartite interpretation for the history of the civic project, in the shadow of the Tower -that of artifice, that of lineage, and that of language.

There are three sections to this thesis, reflecting and speculating on the implications of artifice and its relationship to the human dis/insemination in the wake of Babel.

Section I Postponing Dissemination -the relationship between the artifice and nation (city) building, and the entropic consequences of delaying the momentum of human dispersion

Section II **Artificial Insemination** -the relationship between artifice and tyranny, the consequences of exalting artifice to the domain of replicating and manipulating the hereditary course of life

Section III **Seminal Projection** -artifice in the face of cultural and material decay, the implications of the Baroque reading of history and language on the formation of the modern world view

Section I: Postponing Dissemination.

We begin our story with the stage 1



Frontespiece to Turris Babel,
Athanasius Kircher
(Amsterdam, 1679)

"Post luctuosam universalis diluvii, atque Arcae Noemicæ catastrophæ; post tragicum generis humani excludium; post orbis terrarum, pereuntiumque rerum omnium tristissimam faciem: modo posterioris sæculi statum, scenæque insolentis parastasin in theatrum produco Turrim Babel."²

The Epic Theatre of *Turris Babel*

The original setting, paradise lost

As the referential nucleus of the historical cycle, the paradigmatic Eden motif emerges as the recurring tautology to the text of the Old Testament. Everything in the western tradition following the precedent of this moment and place is haunted by its memory.³ The labyrinthine proceedings of human chronology that led us to the present were ultimately conducted against the broadest range, both subtle and explicit, of philosophical, metaphoric and even literal backdrops of this sacred geography. So absolute in its origin, Eden collapsed the sequence of time into an eternal scene: the pastoral setting and foundation for virtually every historical drama of the Baroque *Trauerspiel*.

The Baroque infatuation with the paradisiacal scene is all too easily misinterpreted as a romantic desire to harmonize with nature. On the contrary, the Baroque intention was more so a nostalgic desire to simply return to the asylum of the natural state.⁴ Not that the Baroque mind ascribed to eternity, for this was a period that acutely felt itself tormented by the destructive effect of time and the inevitable decay. Nature was autonomous of time, a *Beatus Ille*, remote from the high aspiration of Babel, but safely beyond the reach of all change.⁵ With the panorama of the timeless scene for history and everything memorable, the helplessly redemptive audience grieves for its lost participation with history and the legacy of the rejection of the eternal life.

The tragedy ostracizes the role of history and divests it of its *relevant* value.⁶ What results, is the transformation of historical matter into an object of civic mourning -an isolated realm of pure martyrdom, a cultural corpse. In segregating the once mutually cathartic relationship between performer and participant, the individual tragedy of specific historical consequence gave way to its revelation as part of a broader historical machination. From what was once the sacred monopoly of *Christian* martyrdom, the more numerous of its secular counterparts emerged as symptoms of a generic keening for all humanity. More than anything else, theatre was concerned with the paradigmatic model of history, superimposed on the contemporary world, whose mechanism uncannily extracted from the *example* of the past what was relevant to the present.

“...Ita quoque evidenti lapsus sul gravissimi exemplo omnem post se retro secuturam
humani generis aetatem edocuit, docereque debuit, Non esse consilium contra

Dominum: sed omnes animi arrogantis machinas, substructionesque ambitionis, quantumvis immanes, inanes tamen & infanas esse, eodemque secum futo petiturus ⁷

Barring no exceptions, the history of what was once restricted to the western world evolved into a universal, albeit Christian, chronicle. It was the ever expanding entirety of this epic, framed by the book ends of judgement and creation, that was the greatest tragedy of all.

Set apart from the topographic implications of nation, the royal court provides the eternal set for the playing of the chronicles. In their obligation to abstain from any liaison with earthly topographies or constructs, members of the court work themselves back to the original progenitors of the city of god, the locus of which, by definition is sovereign to time and landscape. A neutral (at least among nations) sanctuary, along side that of the church, could plant itself in the midst of any environment. With this in mind, one could imagine a superimposed network of genealogical nations suspended above *terra firma*, where wars and diplomacy are conducted court to court, rather than territory to territory, with its disputed rule not over topography but over the chronological title to time ⁸

Within the court itself, however the articulation of history is determined by the collected objects of memorabilia ⁹ Embodied in these strategically placed *props*, are the allegories that influence destiny and time, and it is by their morally neutral agencies that power is secured over the melancholic lifelessness of the hero ¹⁰ Each object initiates a course of thought in an historical narrative, the avocation of which, especially among those of archaeological or genealogical significance, is the pursuit of destiny. Even geography itself was absorbed into this allegorical collection of the theatrical scene. Where the court deliberately spurned topography, the geographic feature emerged as landmark to the mythical legacies of fallen empires and their lost phenomenal presence ¹¹

Turris Babel begins with the frontispiece, the evolution of which is entirely consistent with that of the Baroque theatre. If we may consider its precedent, the Renaissance frontispiece, its distinction is by right of the architectural motif set against the neutral field of the page. The proclamative text is typically set within a triumphal arch or window, ornamented with the allegorical figures relevant to the subject at hand. The allegorical frame, then, is

both a threshold between the reader and the content of the treatise, and an interpretive companion for the journey itself. In the Baroque frontispiece, on the other hand, the text and its architectural frame are conspicuously nominal, if not entirely absent. The allegorical figures are released from the architectural surface and are now positioned onto an idyllic landscape of paradise that was once little more than a blank page. The book, no longer mediated by the architectural metaphor of human artifice, is now a speculative field of allegorical choreography. Now, in this idyllic landscape, the ideas are timeless, independent to the workings of man, and able to move unimpeded throughout the stream of historical thought. The absent letters of the text are here replaced, on the surface at least, with the allegory.

Turris Babel is, in itself, a theatrical work. It exhibits all the characteristics that one would expect from a theatrical production. The text opens by introducing the scene (paradise), and the players involved (Noah, Nimrod, Ninus, etc). Once the context is set, the narrator carefully unfolds the drama in three acts, each scene is graphically portrayed to underline the dramatic consequences of historical fact. Even the normally sober theoretical discourse is demonstrated in the manner of the *Ratio Absurdam*, the most explicit and impressionable extremity of a theoretical hypothesis. The devotional text specifies the audience as well as the setting.¹² We the readers are the third person, caught, as in Benjamin's *intriguers*, eavesdropping on the private machinations of religious and state affairs. As a privileged audience, we are party to the conjectured reconstructions of the intimate exhortations presented by the central characters in the tradition of the dramatic soliloquy. Even the narrator (Kircher) is compelled to state his case in the colorful rhetoric of a dramatic performance.

"O temporum morumque infamiam! O saeculi nostri coluinatissimi fermentum tartareum! O putidissima orbis exulcerati carcinomata, mundi fatiscantis portenta, pestes humani generis, viperas infernales, detestabiles inquam, imperii Catillas!"¹³

The tendency towards this theatrical mode of presentation of the devotional text arises from the influential doctrine of the *Spiritual Exercises* of St. Ignatius. For the Jesuits, spiritual experience begins with the intellectual construct of the imagination, rather than with hidden assumptions of the physical. The aim of this, is not beatific vision, but an ordered and careful praxis of

religious meditation ¹⁴ Meditation is an internal demonstration of the religious episode. Its success depends on how well the devotee's imagination creates for itself a stage and the characters. Essentially, the devotee must transform the self into a speculative other -a played role that enables one to live and explore regions entirely outside of the self.

Like a game of *Make Believe*, events are recreated entirely as vibrant constructs of the imagination. At the speculative level its demonstration must be complete and closed ¹⁵ This trait is recognized particularly in the Loyolan meditation, where the paradigm of imagination is a divine reality, yet its human counterpart can never be quite accurate or rigorous enough. The degree of specificity is infinitely bound to cerebral tonicity, one's investment into the accuracy and detail of the excursion reflects the freedom of the religious excursion. This *game* ultimately extends on to the pages of the book itself, where, in the spirit of the exercise, the hidden orchestrator (the author) manipulates the content, the structure, and the text itself, to tax the limits of imagination in reader/character ¹⁶

Postponing the *Toldot*

There is only one orientation and that is east

View of Mount Arrarat
and the Plains of Shinar
Iuris Babel, p. 13



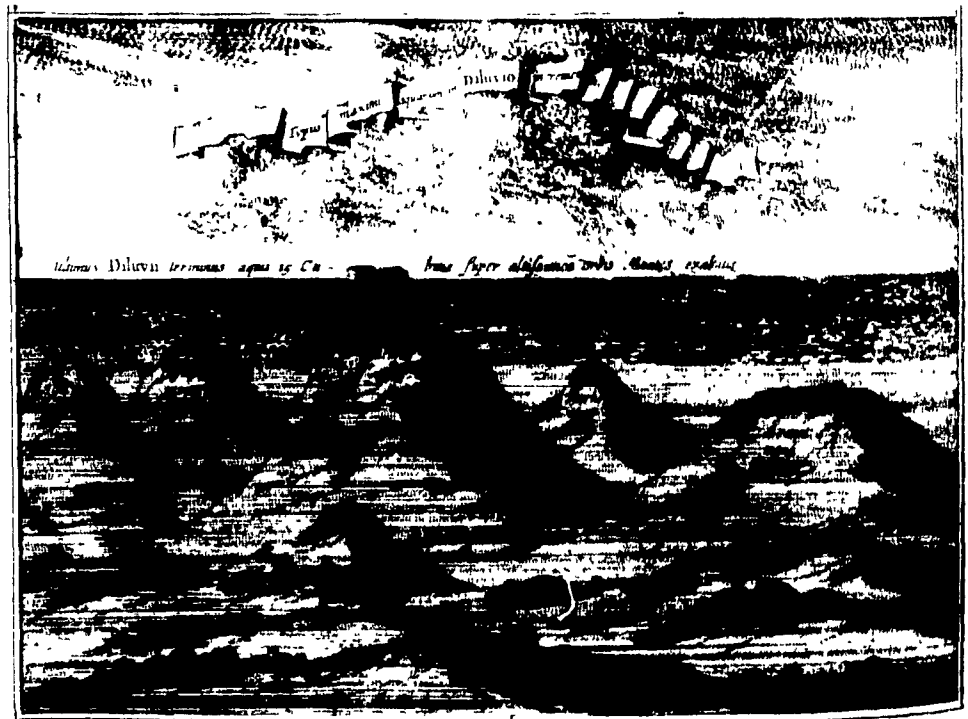
The post diluvium journey begins from the *east*. From mount Arrarat, *in the east*, where the Ark stood, *in the east*, to the plains of Shinar, as well, *in the east*.¹⁷ The Old Testament passage *assumes* a point of origin, yet it never mentions it explicitly. Nor is there any mention of a destination. Both origin and destination are exegetic constructs alien to the pages of the Old Testament script. But a hermetic examination of this passage on its own is telling. The passage describes what the *diasporic* tribe would ultimately be reckoned to, nothing other than its groundlessness and its lineage. Aside from its immediate implications of cardinal orientation, the Hebrew word for east, MDQS, has an etymological stratum of some significance -from the *east*, *in the east*, *east ward of old*.¹⁸ Hence, in the broader sense of its origin, *east* implies a past, or a history, along with its signification of orientation. Thus the reconstructed passage should read *travelling from the east of old*.

Each banishment in the Book of Genesis is directed towards the *east*. The ejection from paradise is *in the east*, Cain's exile, as well, is *in the east*. Each successive episode in the lineage of the Old Testament is sent further and further east of Eden.¹⁹ The eastward route is clearly genealogical. For while each episode is oriented in that direction, they are sequentially linked by the genealogical incantations of the *Toledot*, the hinge linking every disparate

passage of the text by a chronology of lineage. The conclusion, for the Christian project, is in the figure of Christ

Legimus porro verisse homines illos ex Oriente, & In campo Sennar habitasse, cum autem Christum Propheta quidam appellaverit Orientem Propheta quidam appellaverit Orientem, dicens Ecce vir Oriens nomen ejus. Constat de Oriente venisse, qui a Christo male vivendo recesserunt.²⁰

Orientation is thus the historical bond to the original narrative, only to be repudiated in the construction of the tower. The *Toldot* is stalled with the cessation of movement, the ironic consequence of which is a directionless scattering



**The Extent of the Deluge
in relation to Mount
Arrarat.**
Turrus Babel, p 21

The deluge is the prophetic mirror of the imminent dispersion. From the singular point of the chasm, the topographic face of the earth is submerged under the dark envelope of flood water. The entire bloodline of humanity is consolidated into a single roving point, suspended far above and oblivious to the geography below. The Ark is the exemplar nomadic capsule, obedient in its directionless and groundless voyage, obedient in the virtue of its lineage. By contrast, the Tower of Babel is a construct of human design in all its facets, rejecting the inevitable destiny of nature. In itself a solitary point, it defies gravity (as do all constructions), and it commits lineage to a specific ground

The bloodline, in effect, stays put, rebuffing the exile into the commanded pilgrimage through dispersed time and space

The deluge is the antitheses to the creation. Its resolution is a mimicry of the original creation, the rebirth of the once corrupted world.²¹ As a seductive caricature of paradise, the Plains of Shinar are indeed a willing host to the survivors, already equipped with the agricultural and construction provisions necessary to begin a city.²² Virtually everything that is needed -forests, orchards, fields, streams, etc - can be found here

The ground, however, is found encased in a blanket of mud, the vile substance of its rancid past. Shinar is hardly the virginal rebirth that one would expect from a global deluge. It is putrid, for although the plains are fertile, the soil is enriched with the rotting corpses of the deluge.



The Deluge.
Turnis Babel, p. 22

"he who eats the earth of Babylon is as though he eats the flesh of his ancestors."
(for they died in exile)²³

The deluge effaces all but the burden of the fall. It condemns humanity to passive cannibalism by agronomy. In the cycle of mortality it is an inevitable destiny that cannibals will eat their own kind. If anything, it even percolates improbity into the cycle of nature, and thus, the substance of our bodies. As Josephus declares, our lives are shortened, for we are condemned to redeem the

original crime in our polluted soil ²⁴ Shinar incarcerates humanity to face the original cycle of transgression, punishment, and the presence of death ²⁵ Like the first offense, the ingestion of tainted agriculture -commits humanity to mortal lineage- the pain of childbirth, death, and toil while its redemption is in the grace for an enduring mortality ²⁶

The foundation of any civic endeavor ultimately begins with the interdependent relationship between the site and the health of the body. We need only to go as far as Vitruvius to see this as a priority for construction, regardless of the institution to be built ²⁷ Yet, this is not specific to building practice alone. Any appropriation of the earth to meet the subsistence of civilization implies an artifice of human ingenuity whose tainted communion is ultimately a commitment to the city of man. From this point, little more than these intentions are needed to propel a culture towards the sin of the city.

Thus the survivors of the deluge slide into the flatlands of vice out of a seemingly practical choice. Yet in selecting a geography alienated from their origins, they actually pledge themselves to a degenerate existence.

Hic observa, inquit, quod non ait eos venisse in campum, scilicet cupide & curiose ab eis quaesitum, upote ad insaniam eorum commodissimum. Ita profecto est. Insipiens non alivinde accipit, sed ipse sibi quaerente mala invenit, non contentus his, per quae misera natura ultro incedit, sed cumulans ea malis artibus & execratis. Atque utinam paulum ibi commoratus, migraret allo, at ipse habitare ibi gaudet, dicit enim Scriptura, quod invento campo habitaverunt in eo, scilicet tanquam in patria, non tanquam inquilini regionis externae; levius enim fuisset malum, si postquam in peccata inciderant, pro alienis ea peregrinisque habuissent, non pro cognitis & domesticis. Peregrini enim potuissent discedere, sed ibi antea semel electis, immorandum postea fuit, ex consortio hominum perversissimorum in omne vitiorum scelus dilapsi. Sapientes enim non hujus mundi inquilinos se esse norunt, sed peregrinos, memores eorum sibi civitatem esse ac patriam. ²⁸

This descent from the mountains and the subsequent migration into the plains of Shinar is interpreted by Kircher as a fall from the commitment to a spiritual life ²⁹ To him, it is entirely consistent with the fall from grace and the emergence of redemption. We find this in his recurring use of the theme of the allegorical mountain, the consistent backdrop for the cycle of spiritual failures and triumphs. Adam and Eve fall from their mountain paradise, the survivors of the deluge fall from the mountain, into the terrestrial plain. They construct a human paradise in the form of a mountain. And finally, when the heavenly city descends, it does so in the form of a mountain.

To exegetes, the naming of Shinar is in itself a form of prophesy, for only God knows what is to happen to that place in the future. The Haggadah

refers to Shinar as being connected to the Hebrew verbs to *empty*, or to *overthrow*.³⁰ An appropriate title it will be for the field of human revolt. Kircher's interpretation is significantly more violent and unforgiving. Sennar(Shinar) means the breaking of the teeth, or the shattering of one's enemies by God.³¹ Kircher elaborates this interpretation:

Sennaar autem interpretatur exexussio dentium, sive foetor eorum. In campo igitur Sennar habitant, qui positi non in celsitudine virtutum, sed in planitie vitiorum, & detractio- num morsibus proclivos lacerant, & in otiosae vitae colutabro jacentes infamiae suae circumquaque foetorem exhalant. Quorum dentes tum Deus excutit, cum illorum facta simul & verba confudit: de eo quippe scriptum est, dentes peccatorum contrivisti; & iterum; Dominus conteret dentes eorum in ore ipsorum. Nam de foetore eorum per alium prophetam scriptum est, computruerunt jumenta in stecore suo. Computrescere jumenta est carnales homines in foetore luxuriae vitam finire.³²

We live too long (quoth (Nimrod)) thus like beasts
wandering.
Let's leave these gadding tents, these houses wayfaring: a
palace let us build. .

Come let us build a town, and there incorporate, Pass the
rest of our days under a royal state.³³

There are only two possible cities in the universe, the City of Man (Babylon), defined by the civilized desire for permanence and stability embodied in the practice of architecture, and the *Heavenly* City of God (Jerusalem), defined by the devotion to an eternal state of earthly transience. The overture to the lived world, the City of Man, is marked with Cain's rejection of pilgrimage in the construction of Enoch, the first earthly city. But it is a soiled endeavor from the start, for it is the legacy of every city following this dubious origin to be stained with the guilt of the original crime of fratricide.

The revolt against the direction of lineage is not a sudden catastrophe. Rather, the rhythmic momentum of the journey across the plain is gradually retarded by incremental conversions to the static hold of architecture.³⁴ The migration begins as a caravan, wherein the discipline of architecture develops gradually from the first houses built from the mud and slime of the deluge, to its culmination in the construction of the tower.³⁵

Inde verisimile videtur, sulffe civitatem valde ruditer esstructam, domibus ex eadem materia, qua in Turri estruenda utebatur, obiter confectis: cum vero hoc pacto quotidie experimentia duce, in fabricandis majoris momenti muris, turribus, palatisque erigendis, mirifice proficerent, uti acri pollentes ingenio, & quotidie ad novas rerum ad Architectonicam spectantium inventiones, animum adjicerente.³⁶

Defiance of the eastward persuasion of the *Toldot* is the cardinal basis for the city. The twin royal palaces of queen Semiramis demonstrate this mutiny: one looks east into the prophesy of the future, and depicts the domination over nature in the hunt and the construction of monuments, while the other looks to the west into history, depicting its lineage and victories over rival nations. But the rejection of the *Toldot* also bears a price for the city. The city introduces confusion, or in this case, *mis-direction*. While facing *east*, on the *eastern* outskirts of Nineveh, and awaiting the *eastern* wind to destroy it, Jonah reflects on the inevitable failure of the disoriented city:

And should not I be sorry about the great city of Nineveh, with its hundred and twenty thousand people who cannot tell their right hand from the left, as well as cattle without number?³⁷

The construction of the tower, then, inaugurates an atlas:

A lofty Tower, or rather Atlas wilde.³⁸

The first grounding of architecture anchors the drift and invites the project of acquisitional dominion. Out of the generic surface of Shinar, emerge orientations, lines, boundaries, and eventually names, nations, and war. The representational museum of the world, the monolithic delirium of cultural inscription by planar geometry, began with this spiked monument. It is simultaneously at this point that an important divergence takes place. Within the emerging definition of nationhood the family of Heber, the progenitors of the Hebrew nation, alone remained exclusively committed to the original command of dispersion. Out of the entire spectrum of nations the Hebrews defined their nationhood explicitly from the nomadic tradition of groundlessness and transience of the *diaspora*.

The conduit for the Hebrew communion with YAWLH is through the exclusive form of diasporic nationhood. The cycle of generations progresses in episodic intervals of a growing nation by the chronological exploits of the individual *fathers*, beginning with Adam and culminating with the leadership of Abraham, where promises are fulfilled and redemption for the anterior is made possible. As the narrative unfolds, the scope of the *Toldot* focuses more closely on Abraham, where the scale of confrontation broadens. The cycle begins with fratricide, it graduates from inter-familial conflict, to inter-national and ultimately to that between nation and YAWLH.³⁹ But regardless of the scale,



The Royal Palace of Queen Semiramis.
Turris Babel, p. 58

the ultimate responsibility of each episodic community rests with an individual *father* -beginning with the heavenly *father*, to the *fathers* of the timeless ones (the Giants), and finally to the civic *fathers* (the Kings) ⁴⁰ For despite the sin of an individual, the punishment is most often inflicted on the nation ⁴¹ One *man* is one tribe, there is no such thing as a solitary identity, rather, individuals are part of a larger body of experience as citizens of a *nation* ⁴²



The Genealogical Tree of
the Family of Noah.
Turnis Babel, p 104

The communal body is the key to the Hebraic consciousness. The bond of the individual to nation does not arise from a modernist sentiment of patriotism, but a profound presence of the historical legacy of a nation within the contemporary being of the individual. In the same way that the *Toldot* defines the present as a projection of ancestry, current events are regarded as synchronous with the historical. They are examined together and assessed as if they were contemporaneous, with the prejudice of a temporal gulf explicitly omitted.⁴³ The community to which an individual belongs extends beyond its limited contemporary scope to include the entire ancestry of the past, a sum total of individual experiences.⁴⁴ The result is an incorporation of existence as part of a larger melody, where every move in the present is in the parentheses of recollection and anticipation.

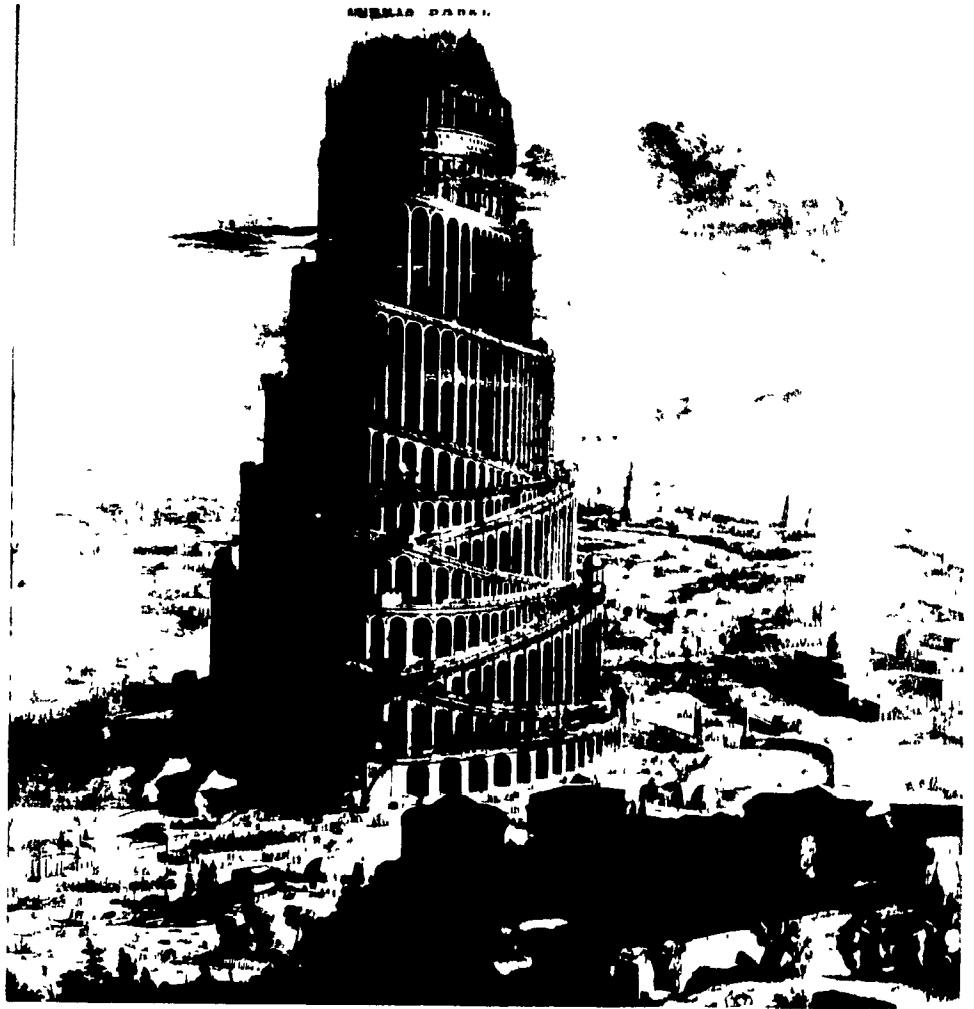
Nationhood is thus an extension of family. For by Kircher's account, and by Hebraic tradition, it ultimately evolves from but a pair of progenitors, to a family, to a tribe, and finally to a nation. As part of a genealogical mechanism, the conduct of the state must be read in terms of inseminate behavior. The state generates itself, for its survival depends on its own procreation. The relationships between states -diplomacy, power, war and peace- are conducted within the parameters of a sexual code of pure and impure coitus, the foundations of lineage. In times of war, the invading city (male) rapes the victimized city (female). But in peace, they are restrained by familial taboo, cities are sistered and fraternalized. We even go to the extent of personifying the state by christening them with figural names, such as, France, Paris, or Milan. Their loss is mourned with a funeral, and their union celebrated with a wedding party.

For the Jews, the certainty of the present, then, relies on the continuity of the generational chronology of the Nation.⁴⁵ Conclusively, the Nation and its citizens must be linked to their original progenitors, as far back as Adam and Eve. Taken individually, however, the first episodes of the Book of Genesis seem unlikely to be part of an exclusively Hebraic generational cycle. Indeed, for the sources of these episodes have been discovered in traditions other than Hebraic. But most importantly, the glaring contradictions inherent within the narrative of the Old Testament seem to defy any possibility of a reasonable genealogical sequence.⁴⁶ This, of course, has profound implications for

speculating on the role of the *Toldot* within the structure of the Old Testament. Rather than being an inventory for hereditary recollection, the incantation of the *Toldot* connects the disparate elements of the universe under the assumption that every event has the potential for a pedigreed linkage.⁴⁷ It articulates the itinerary of a transforming entity, an impervious mechanism of speculated projection, it joins disparate episodes only at their most extreme appendages.

On the other hand, it is specifically the absence of the *Toldot* that distinguishes all other nations from the Hebraic. The roots of modern nationhood are found in the Latin word *Natus*⁴⁸, an allusion to birth as the drawing of a shared origin out of a previous state of dispersal. Nationhood counterbalances the incessant pressure of dispersion with obstinate correspondence: a perpetual reconciliation of origin and uniqueness in the face of homogeneity. Thus a nation is not merely *born*, for its existence is, by definition, a constant *state* of birth.

The Artificial Consumption of Shinar



The Tower of Babel.
Turnis Babel, Frontespiece
to Book II

The tower inflates the limit beyond our immediate experience of earth. It extends the horizon by breaking the limits of perception (the obvious implication of its height), it extends memory by storing inscribed experience (Kircher speculates that it contained interior Archives)⁴⁹, and it extends the present by breaking the rhythmic limits of the agricultural cycle stockpiling produce (the modern archaeological conclusion is that it began as a granary)⁵⁰. By this composite observation, one could speculate that it delays the exhaustion of death by accumulating time, by stealing the passing present, it projects the city forward, by asserting the immortality of the rear, it forms destiny to ones own liking, and makes it indelible.

The purpose of the tower is to have more than enough, to have a surplus at the expense of its entropic host. With its *head* held high above the ground, its gaze induces a greater hunger for the contents of the horizon, more than the eyes are normally capable of aspiring to. It is no surprise, consequently, that

architecture and commerce are of kindred origin. The city of Babylon, after all, embodied massive wealth and ephemeral values.

Babylon was a great city, clothed with fine linen, purple, scarlet, and was girt with gold, precious stones and pearls.⁵¹

The underlying engine of commerce and wealth is the exchange and accumulation of a *contrived* excess. But beyond this immediate suggestion of materialistic accumulation, the underlying intention is the stockpiling of time.⁵² All of the extensions of nature engendered by the tower ultimately delay the passage of ephemeral matter and experience from their destinies of temporal decay. Charged with this basic responsibility, the civic logician (by traditional definitions, *the architect*), whose matter is specifically the artifice of providence (the plan), manages the surplus by deviating time from its natural course. The city could hardly be utopian, for its presence is bequest by an intentional *imbalance* with nature.

As proxy to the surplus, currency has a profound implication for its manner of extending the frontiers of the city. The coin is an absolute representation: an allegory for the natural world, the matter of which is incarcerated in the civic inventory. Stamped *permanently* on its face⁵³ are the numerical values of this temporal surplus: the economic value, a representational portion of the civic treasury, the date, a specific claim to the city's eternity, and the name, heraldry, and language of the city. All of which ascertains the legitimacy of the Nation's *immortal* origin.

It comes as no surprise that Kircher regarded currency as an indispensable component to his scholarship,⁵⁴ for the exchange of coins was, in fact, the exchange of allegories. But specifically relevant to the topic at hand, Kircher cites the exchange of coins in the market place as one of the more probable causes for the mutation and dispersion of tongues.

...words are bartered and traded like goods...⁵⁵

Even language, the text of the surplus, is traded throughout the world like an excessive commodity.

Thus the task of building the tower will have precipitated the culture of excess. This intention was the destiny of the form itself. The erection of a vertical extension of the once homogeneous surface of Shinar introduces a volume where there had been none before. More specifically, the area of the continuous plain is stretched into a spatial paradox with respect to the sum total of its surface. This paradox takes the form of a spatial imbalance introduced with



**Illustration of several
Hebraic coins.**
Turns Babel, p. 161

the creation of a volume - a vacuum of *artificial* space excluded from, and foreign to, the environment of the plain. This is the stockroom of civil excess. The archives, the granaries and the housing - everything that breaks the meager balance of survival belongs to this void. And in its ensuing occupation, it only encourages more.

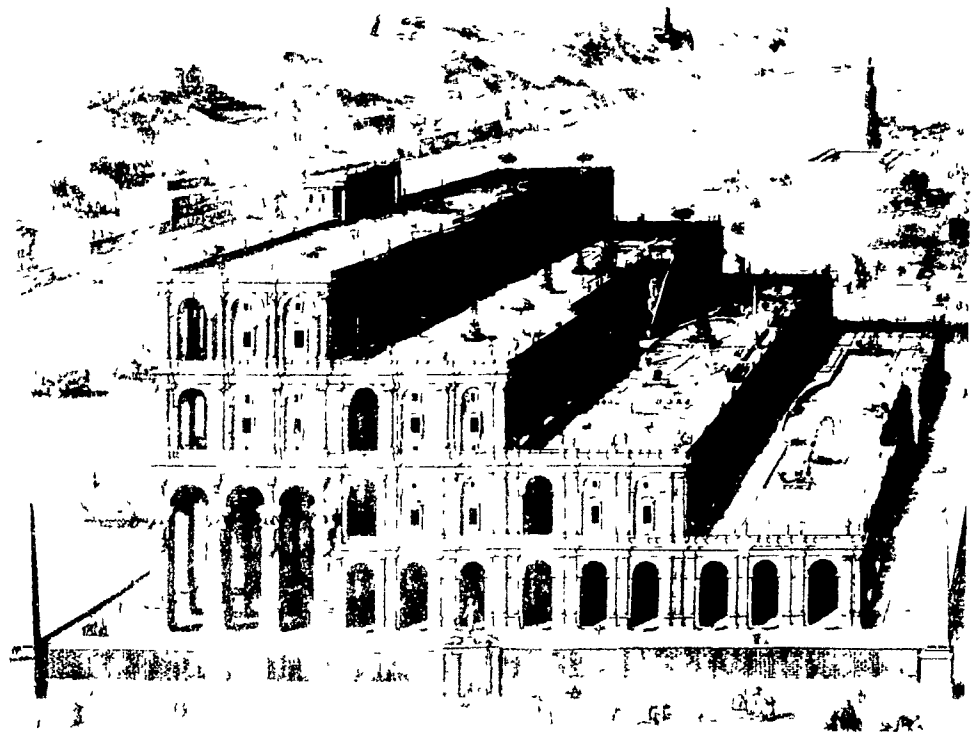
The trick to this edification of absconded time is in its seamless continuity with the ground. The tower emerges incrementally from its own perpetually revised horizon. Its figure is its own scaffolding, the telltale *Scala Cochlearis*, like the pursuit of the dispersion, it is a self-propelling enterprise with no apparent end. Time seems to collapse in Babel, where the eternal is temporary, but *permanently* temporary. To build the eternal structure is in itself an eternal task. But by paradigmatic nature its only fulfillment is in the absolute of its completeness. The point is not to elude the ground, but to raise its mass to heaven. In this respect, the tower is a tapering bridge of terrestrial matter exchanging growing portions of its substance for celestial matter in the course of its ascent.⁵⁶

In the *Attestation to Guidea*, each successive floor of the tower construction is refereed to as a new temple.⁵⁷ The implication is that every interstitial stage of the project presents a new ground to be broken. Again, there is no apparent desire for the tower to divorce itself from the ground. Rather the dominant criteria of these constructions seems to be the desire to perpetually consecrate new ground. From this it seems that the temple enterprise seeks only to redeem itself by appropriating the normative terrestrial limitations for itself, and in its own terms. As we see even more explicitly in the pyramid construction, the mode of artifice involves the substitution of nature - in this case, by building an *artificial* horizon.

A circular wall is constructed, high enough so that a person seated in the center cannot see any earthly objects over the top of the wall. The seated observer, with his head at the center of the circle, watches a star rise and directs another surveyor to mark the place on the wall where the star appeared. When the star sets, he causes another mark to be made.⁵⁸

An artificial construction is unlikely to be a hermetic substitute. For regardless of its plenary sophistication, it will ultimately be subject to a larger entropic will. Thus as structure postpones gravity from its static rest, the artificial suspends, without severing, the comprehensive animation of the world. It is more like the insidious infiltration of an *artificial* heart into a functioning body.

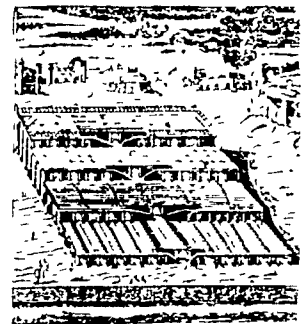
The Hanging Gardens of Babylon
 Turris Babel, p. 60



As one of the seven man made wonders of the world, the Hanging Gardens of Babylon present an exemplary specimen of this artificial condition. Built as a terrestrial imitation of the mountain paradise, the principles of its assembly were relatively straight forward, and from humble beginnings – the traditional construction of the village hut – the roofs of these huts were layered with earth and thatch, before and after every rain. Eventually, they would evolve into a substantial patch of fertile soil, leading to the widespread tradition of the urban roof garden.⁵⁹ For purposes of argument, the implications of this parochial beginning are resounding. The Hanging Gardens collapsed the distinction between ground and roof, a condition that essentially recreated a simulated ground where it shouldn't have been – a *suspended nature*.

But as Kircher demonstrates, the artificial construct not only appears as an imitation, it is obliged to imitate nature to the point of its corporeal assembly. Hence Kircher's material inventory of the Hanging Gardens, which reads like a cross-section through the earth itself:

Stone beams 16 feet long and 6 feet wide (Bedrock)
Lead strips (to prevent moisture) (Mineral deposits)
Reeds bound together with asphalt. (Olein substratum)
Double layer of Bricks set with Gypsum (Clay)
Earth deep enough for roots to take hold. (Top Soil)
Receptacles for water (lakes and rivers)
Light. (Ether)⁶⁰



The Hanging Gardens of Babylon. Cut Away View.
 Turris Babel, p. 61

But it is in the underside of the Hanging Gardens where we find explicit evidence of what is traditionally considered as human artifice. Here, in this interstitial space, the ligaments and veins of the earth were reconnected to the severed garden above by way of human machinations. Under the apparent surface of the artificial we finally encounter explicit evidence of an engineered reconciliation between the suspended earth and the ground.

Cum viderent artifices, arbores, quas supra ultimum planum plantare volebant, sufficientem terram habere non posse, omnes substructionum columnas, quos ipse *Talos* vocat, intus data opera vacuas reliquisse, terrestrique globa replevisse, eo fine, ut arborum supra plantatarum radices hisce columnis ad quadrati prismatis formam constructis, sese paulatim insinuate, firmam consistentiam consequerentur.⁶¹

As with the civic manipulation of time, the true artistry of the Hanging Gardens was in its diversion of water from running its natural course. Water is, after all, the blood of the terrestrial mechanism. Its elastic magnitude is determined by the extensive spectrum of rhythmic time; it is tidal, larger, it is seasonal, larger still, it is a deluge. Water does not subside, it pulsed rhythmically, in and out, of the terrestrial reservoir known as the *Chaym*, located directly below the *Ebhen Shettyyah*, the place of the first solidity and light. From here all the waters (and above, the light) emanated, through vast underground canals and capillaries, into the regions.⁶²

The precarious relationship between city and water is at the root of early Mesopotamian culture. Order is embodied in the temperament of the Euphrates river. Its rhythmic swells and contractions ordain the cyclical routine of seasonal time and irrigation.⁶³ Even the acclaimed code of Hammurabi dwelt obsessively on the legal implications of this subject.⁶⁴ But this relationship was paradoxical. For while survival depended on the ingenuity of artifice to draw from its meager reservoir, its capacity for vengeance posed the greatest and most unpredictable threat to security. The entire cultural project was committed to its mastery with an artifice that was no less than an adventure. Like the hazard of playing with fire, the more that the beast was restrained, the greater the liability in its escape. With the enormous accumulation of riverbed silt, the region was especially vulnerable to unpredictable flooding. The habitual compensation of raising the irrigation to monumental heights above the plain only magnified the potential for an even more disastrous outbreak of flood waters.⁶⁵ Thus, out of this adversarial

relationship, emerged the spectrum of Babylonian artifice. The tools of the city, weapons and ploughshares, were all essentially aquatic contrivances.⁶⁶ Even the earliest siege towers of the Assyrian empire were large earthwork platforms used to soak and then weaken the mud fortifications of an enemy city.⁶⁷

With a will of its own, the Euphrates was a wild snake that would enter and leave cities within the course of a lifetime.⁶⁸ Babylon was resolutely committed, not only to its imprisonment, but its manipulation, contortion, and exploitation, as an expression of civic virility. In reconstructing the fallen Babylon, Nabopolassar, and with his son Nebuchadnezzar II, manipulated the river to run diagonally through the center of the city and around its periphery to form two island precincts.⁶⁹ Like the orientational chaos of Nineveh, the sacrifice for this enterprise was a city noted for its disarray and its condemnation to a perpetual state of disrepair.⁷⁰ Babylon was a veritable encyclopedia of water works: water mills, siphons, fountains and even the hanging gardens, all of which were diversionary extensions of the Euphrates beast. In an ironic twist, the waters were even put in service of the city by way of the public marsh, the ever valuable source for the much needed cane reeds. Where with respect to the deluge, the tower was built out of fear, the public marsh was an identical but inverted project built out of arrogant boldness. The edges were lined with the same waterproofing that the tower used to protect itself from inundation. Where the flood threatened to surround the walls of the tower, the same walls now surrounded the flood, artifice had rendered the once limitless limited.

The city began and ended with this relationship. As a final blow, Sennacherib diverted the Euphrates to reduce the fallen city to a marsh wilderness.

Time Postponed

Unusquisque hominum aut Hierusalem aut Babylonis civis est: sicut enim per amorem Dei sanctus quisque Hierusalem civis efficitur: ita per amorem saeculi, omnis iniquus in Babyloniae structura operatur. Ad construendum autem spirititalis Babyloniae aedificium per servos homines exemplum illius antiquae Babel imitantur. Cujus civitatis, ut inquit scriptura, auctores pro faxis lateres, & pro coementis bitumen habuerunt.⁷¹

In the Christian tradition, the distinction between Babylon and Jerusalem is clear and dialectical. As with the descent into Shinar, citizenship in either of these cities is largely the result of a personal will. Yet there are no degrees, even the slightest enticement into Babylon means certain sequester from the city of God. It is impossible, as demonstrated by Kircher, to live purely in the state of Jerusalem. For the moment that even the most innocent of artifices is exploited, such as the use of an eating utensil, one is condemned to Babylon. It is between these dialectical extremes that the idea of purgatory emerges, where everyone, regardless of piety, must suffer the appropriate punishment for the inevitable time serving as citizens of Babylon.

Civilization, then, is distinguished by artifice. Artifice, however, disrupts the delicate entropic balance between biological man and nature. Once outside the closed self-sufficiency of the Ark, humanity feeds on its terrestrial host. It is well understood, consequently, that human ingenuity is ultimately at the expense of the nature. In order to build the tower at its desired scale, the earth must be transformed to an apocalyptic wasteland.

Sequitur secundo. Si omnium sylvarum totius orbis terrarum ligna in unum locum fulsent comportata, & totus orbis terrarum in limum, seu argillam cessisset, & oceanus cum omnibus maribus & fluvis in bitumen, nec ligna ad coquendos lateres, nec ad bitumen oceanum suffecturum fuisse. Novum igitur orbem condere, eumque hoc duplo majorem ad hanc fabricam expediendam esse oportebat.⁷²

Even in the most obtuse manner, the construction project is destined to exploit natural matter. Regardless of the abundance in building material, nature is rejected for the artificial. Yet in the making of bricks, an artificial substitute for natural stone, the consumption is even more inherent. In burning the bricks, the forests of Assyria are exploited as fuel, and as a result, the entire sky is covered with a pall of black smoke.

**So in a trice, these carpenters disrobe,
Th'Assyrian hills of all their leafy robe,
Strip the steepe mountaines of their gastler shades,
And powe the broad plaines of their branchie glades
Cartes, Sleds, and Mules, thick - Justling meet abroad,
And bending axels groane beneath their load.**⁷³

But it is at the paradigmatic scale of the project that the consumption transforms the topographic composition of the earth. In accumulating the mass to reach into Heaven, entropy dictates that the thirst for materials will condemn the builders to dig into Hell.

**Heere, for hard Climent, heap they night and day
The gummie slime of chalkie waters gray:
There, busie kil-men pite their occupations
For bricke and tile: there, for their firme foundations
They digg to hell; and damned ghostes againe
(past hope) behold the sunn's bright glorious waine.⁷⁴**

In the Van Eyck version of the Tower, a quarry is introduced next to the foundation, leaving a gaping hole that grows deeper and larger as the project progresses.⁷⁵ As it moves upward, the consumption of nature leads it inevitably downward, approaching, at the opposite ends of the project, the reciprocal limitations of desire and apocalypse.

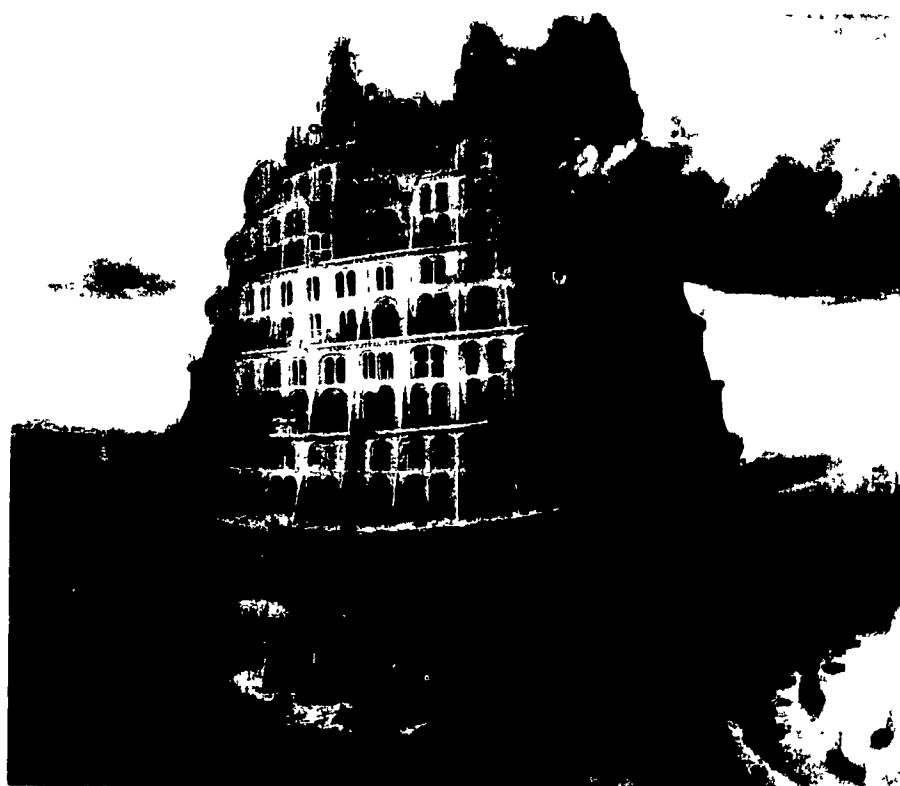
There can be little doubt, then, that artifice necessarily involves some form of violence. For even the Temple of Jerusalem, as we shall see below, began its construction in an aggressive manner. Nonetheless it is as a result of this inevitable act of hostility that we find the completion of the artificial task in its reconciliation apology.

Dans l'édification d'une cité, trois éléments concourent. d'abord on extrait avec violence des pierres de la carrière, avec des marteaux et des barres de fer, avec beaucoup de travail et de sueur des hommes; ensuite avec le burin, la bïenne et la règle elles sont polies, égalisées, taillées à équerre, ey troisièmement elles sont mises à leur place par la main de l'artiste. De la m^eme façon dans l'édification de la Jérusalem céleste il faut distinguer trois phases: La séparation, le nettoyage et la "position". La séparation est violente, le nettoyage purgatoire, la position éternelle. Dans la première phase, l'homme est dans l'angoisse et l'affliction; dans la seconde, dans la patience et l'attente; dans la troisième, dans la gloire et l'exultation. Dans la première phase l'homme est criblé comme du grain, dans la seconde il est examiné comme l'argent; dans la troisième il est placé dans le trésor.⁷⁶

Ultimately, the city is condemned to the perennial cycle of construction, detilement, destruction, and redemption.

King Nabopolassar, builder of the temple of E-TEMEN-AN-KI (meaning *the House of Foundation Between Heaven and Earth*⁷⁷), declares
let the performance of my hands endure forever⁷⁸

The implication is that the performance, rather than the product, is what is really enduring. As we have seen from the temple obsession with a perennial consecration of ground, the ritual of building is an ongoing responsibility, not only of the king, but more importantly, the eternity of his lineage. The ritual of construction is really an indefinite cycle of renovation that begins with the deity Marduk, the one who *repaired* the tower,⁷⁹ and continues obediently with every successive member of the patriarchy until eternity. The temple was never intended to be finished, for it is through the *ritual* of construction that its worship is addressed. If the citizens fail to abide by cult rites, the foundation will crumble and fall into disrepair.⁸⁰ The same intention may even be speculated from Pre-Columbian temple construction, where an aging temple was said never to be abandoned. Instead, it was continuously rebuilt over the same foundation, whose geomantic orientation had already been long established.



The Vienna Tower,
Bruegel the Elder

Modern representations of the tower seem to be consistent with the interpretation of the project as a perennial construction. The Vienna Tower, by Bruegel the Elder, reveals the monumental chaos of bulkheads, incomplete facades, and crude structures, by inverting the project.⁸¹ One is hard pressed, however, to discern whether this chaos is in fact construction or destruction. The human endeavor of construction is ultimately subject to the simultaneity of

both ⁸² To prepare a ground for construction, we destroy it. To make a material utilitarian, we transform its original composition. Even the procedure of the building trade is kin to the military campaign: a destructive task. Nimrod, the acclaimed builder of the Tower, is himself portrayed as both architect and general, the builder and the destroyer. But in the end everything, especially the activity in humanity's domain, is subject to the ephemeral order of nature. It is a destiny that subjects the fruits of labour to perennial ruin.

From the point of dispersion, and on, *Homo Faber* deposited his outdated equipment of civility into an ageless archive of obsolescence, the image of the Tower of Babel. Ancient epic and contemporaneity were superimposed in the extravagant theatre of the ultimate in civil endeavors. The extensive catalogue of the evolving image of Babel documents the genealogy of a growing monstrosity, from the most innocuous biblical illustrations of a small endeavor, to its culmination in the spectacular monument by Bruegel: a figure swarmed by the technological remora of civil construction. ⁸³ The Tower of Babel ascends as the exclusive *arche humana* (a stationary ark), absorbing in its legacy the obsessive fascination with the tools of its own construction and destruction. As we see in the Colbenz version of 1594, by Lucas van Valckenborch, an exuberant fascination with the collection of technology was the mode of reading the tower. ⁸⁴ This theatre of human construction, crammed into the epic image of the tower, became the most prized possession of the noble household. Even Rudolf II, whose *Wunderkammer* was said to be without rival in all of Europe, considered his most valued treasures to be his twin versions of the Tower by Bruegel, ⁸⁵ the value of which was gauged by the artistic merits of detail and precision in describing the entire spectrum of technical activity.

Other than the will to construct or destruct, little distinguishes the sword from the plowshare in the museum human invention. Both, as agencies for the procurement of the city, are interchangeable with a minimum of exertion. The mechanical parasites that swarm the Large Tower are sovereign from the commitment to war or peace until placed at the service of the Architect, or General. But this strange oscillation of the purposeful tool is only contradictory from our point of view. Even in Vitruvius it is obvious that the architect is charged with all the facets, whether violent or peaceful, for the maintenance and propagation of the city.

The commitment of the tool to a purpose rests with its *name*. Without this, what one builds is instantly destroyed by the next. It is here that the project first succumbs to the confusion.

**Bring me (quoth one) a trowell, Quicklie, quickie;
One brings him up a hammer: Heeaw this bricke,
Another bids, and then they cleave a tree:
One calls for planckes, another mortatr lackes,
They beare the first, a stone; the last an axe:
One would have spikes, and him a spade they give:
Another askes a sawe, and gettes a sive:
Thus crosly-crost, they prate and point in vaine;
What one hath made, another mars againe.
Nigh breath-les all, with their confused yavling,
In booteles labour, now begins appawling.⁸⁶**

Collation cedes to commotion on the construction site.⁸⁷ The once cooperative enterprise is subverted into a self-destructive farce. But the comic degenerates into the violent, when one would ask for mortar, the other would give a brick. This misinterpretation would lead to the first hurling the brick at the second in a rage of frustration. Inevitably, the communal rage would envelope the entire project, and the tower would transform into a scaffold of gratuitous violence. YAWEII's revenge is in the spirit of human mockery. By allowing the construction of the project to continue as much as it did, the more severely he could humiliate them in the end.⁸⁸

The confusion, however, is really the instrument for a destined order. Complete dispersion and the occupation of the earth is an inevitable order, as prescribed by both Noah and God. Kircher cites the dispersion and the confusion of tongues as a form of divine artistry that merits respect for its foresight and the subtle nature of its careful engineering.⁸⁹ It was entirely intentional that the course of mutation was set into place in this manner. Yet from among a great tableau of possible calamities, such as flood, fire, and pestilence, the punishment was economic and merciful. For it allowed, through the faculties of reason, the possibility for comprehension among the diversity of languages.

The inevitable dispersion is anticipated in the order of the construction project itself. In order that its monumental scope may begin, the work must be delegated and dispersed into its most constituent tasks, forcing Nimrod to rigorously speculate on their course of action and their ensuing implications entirely beforehand.

"Fodiant alii argillam, alii bitumen colligant, comportent lignorum fasces alii, alii fornaces ad lateres coquendos, aptas instruunt, instrumenta utensilia alii ad laborandum idonea cudant, jumentorum multitudo praesto sit, & incipiamus; ferveat opus, & summa cura & diligentia observetis ea, quae ego meis architectus, & ipsi vobis facienda, commendaverint"⁹⁰

In the spirit of the painterly work, *Turris Babel* supplants pen for brush in presenting the spectacle. The entire course of construction and its implications is speculated on down to the most minute of details. Where the verse in the Book of Genesis is deficient, exegetic speculation fills in the rest. Linkages are made between disparate passages in rigorous detail. In turn, the entire project is grounded in the most minute and absurd of nuances. Even the smallest shred of sacred evidence holds the possibility of generating itself over and over again while remaining true to its origin. In Kircher's imagination, the entire scope of this logistic theatre is recreated as a demonstration. Every aspect of the original verse is projected beyond the limits of the biblical project and dispersed into exegetic sub-stories. Indeed the Old Testament is multifaceted, for now it is overloaded with the potential for elaborations just as sacred as the original skeleton. The single germ of an idea may take an infinite number of possible courses. As an example, Kircher deduces the linkage between the flood and the tower with the accumulation of the work force necessary to construct the edifice

(From the original three pairs of post diluvium progenitors to the time of the construction of the tower 275 years later, and also assuming the childbearing age at 14 years, Kircher rigorously projected the total population of the earth to be 9 094,468 humans.⁹¹ Further speculations had to be made for the demonstration to be accurate. In order to service the construction of the city and the tower, 50% of the population would be committed to the infrastructure leaving a workforce of 4 547,234 actively constructing the tower.⁹²)

But regardless of the vacillating assumptions that lead to the final figure, the theatrical demonstration demands the appearance of accuracy if it is felt to be credible.

In another section of the text, Kircher explains this dilemma as a result of human providence. A chronological paradox: even though the smaller Ark took 100 years to build, construction of the monumental tower lasted only 25 years yet the opportunity for its construction was over 200 years. Kircher's speculation, however, is that the planning (providence) must have consumed the remainder.⁹³ The implication is that architecture must devote a larger portion of its pursuit to the demands of providence than to construction.

More generally, architecture and the city are born of the simple necessity of providence. Kircher's Nimrod is the first to challenge the prophecy of an inevitable destiny. Yet even though the menace to his security and power is an impending certainty,⁹⁴ all that he can do is postpone the eventual dispersion of the multitude into the other lands.⁹⁵ In a deliberate ruse, he promised his citizens a tower that would ensure a lasting name, reputation, and glory, instead of the poverty and humiliation of the nomadic life. The tower would end rootlessness forever - a human Jerusalem. In the day it would be a permanent silhouette on the landscape, at night it would act as a beacon.⁹⁶ Consistent with the postponement of time and space (agriculture, History, genealogy and volume), the tower delays the natural course of the nomadic *Toldot*. Instead of living in the immediacy of a nomadic life, the city is ruled by postponement of the present in providence. Delay of the temporal for the sake of immortality is at the root of the civic code. Every construct and gesture of the citizen is flavoured with that challenge.

By necessity, the architects are consequently dispersed into insular vocations to assemble the complexity of the city's infrastructure.⁹⁷ Everything that constitutes civilization is embodied in that responsibility. The end result is a logistic scope that reads as a city in itself. Thus the architects command the

Laying of the foundations
 Directing the labour of the quarries
 Directing the labour in digging clay
 Directing the labour in felling wood and trees
 Baking the bricks in the ovens
 Collecting pitch
 Digging up stones
 Preparing iron tools such as mattocks
 Basins
 Hammers
 Screws
 Scoops
 Gnomons
 Grappling-hooks
 Other tools necessary for building
 Supervising potters
 Directing the artisans skilled in making wooden vessels for carrying lime
 Ladders
 Machines for lifting stones
 Beams for scaffolding
 Distributing to the workmen at the appointed time the provisions and food produce collected here and there
 Conveying provisions and food produce by camels
 Horses
 Donkeys⁹⁸

Both the tower and the city are inseparable, for even the monumental construction of the tower fills its hold with the institutions that are usually familiar to the city, such as, archives, lodging, furnaces, factories and food stores.⁹⁹ The architectural prophesy of the plan creates an entirely new city within the imagined space of providence. Architecture, then, is not merely concerned with the transformation of an existing matter, for that is the domain of the craftsman. Providence treats time as a marketable excess. Natural time is accelerated beyond its present into an intellectual reservoir. Its unforgiving suddenness is transformed into a spacialized configuration of surplus thought. The world in itself becomes intellectually transient and physically allegorical. The world is an oyster. Shinar substitutes for paradise, while God is replaced by FORTUNE:

"In terra, in quam fortuna rerum arbitra nos constituit, persistamus. Videte, & considerate hanc, qua modo fulminat, Sennar regionem;"¹⁰⁰

In most representations of the tower, Nimrod is shown approving plans presented by his subordinate Architect/General. Whether these are architectural or battle plans is entirely ambiguous.¹⁰¹ Both architect and general work from the same lexicon. Words describing the structure of an edifice, such as a *Column*, are used to describe a formation of soldiers,¹⁰² titles in the army of construction, such as *foreman* also find their equivalent in the military tongue (a foreword scout).¹⁰³ More convincingly, the Hebraic and Roman origins for the word *Tower*-MGDL¹⁰⁴ and *Turris*¹⁰⁵- refer directly to a military fortification¹⁰⁶ simultaneously, but not exclusively, as to a tower.

Long before the failure of the tower, confusion and dispersion are the natural adversaries to the construction of the city. Nimrod's ordinance disperses, or rather *projects*, his plans into a specific hierarchy of monodic labours.¹⁰⁷ Like military generals, architects are slaves to a chain of command (a prophesy to their eventual condemnation).¹⁰⁸ The prince commands the architect/general who in turn commands the worker/soldier. The architect is not asked politely to carry out his orders. Rather, he is obliged to by providence.¹⁰⁹ As part of this family of hypnotic conviction, Nabopolassar *causes* rather than commands his servants to carry things.¹¹⁰ Power not only enslaves the body to carry out the construction of the city, it rids the soul of will and enslaves the mind to the ruler.

- 1 Benjamin, Walter *The Origin of German Tragic Drama*, p 85
- 2 Kircher, Athanasius *Turris Babel*, (dedicatoria) I "After the calamitous catastrophe of the Flood and the Ark of Noah, after the tragic demise of the human race, after the woeful spectacle of the obliteration of the earth and its contents, in the manner of a new state of the succeeding age, and against a background of extraordinary scenery, I introduce upon the stage the Tower of Babel"
- 3 Fishbane, Michael *Text and Texture Close readings of selected Biblical Texts*, p 111
- 4 Benjamin p 91
- 5 Ibid
- 6 Ibid
- 7 Kircher *Turris Babel*, (dedicatoria) II "so also by the blatant example of its grievous fall it taught, and ought to teach, every age of the human race which was to follow after, that "there is no counsel against God", rather, all the machines of the arrogant spirit, all the foundations of ambition, no matter how great they are, are nonetheless vanity and madness, and are destined to perish by the same fate "
- 8 Benjamin p 92
- 9 Ibid , p 93
- 10 Ibid , p 132
- 11 Warnke, Frank J *Versions of the Baroque, European Literature in the Seventeenth Century*, p 70
- 12 Ibid , p 137
- 13 Kircher *Turris Babel*, (dedicatoria) IV "O the hellish ferment of our foul age! O suppurating tumors of the ulcerated world, portents of a world on the brink of exhaustion, plagues of the human race, infernal vipers, detestable Catalines of the empire!"
- 14 Warnke *Versions of the Baroque*, p 139
- 15 Ibid , p 93
- 16 Ibid , p 97
- 17 Cassuto, A *Commentary on Genesis*, p 237
- 18 Walton, John H *The Tower of Babel*, p 9
- 19 Fishbane, Michael *Text and Texture*, p 25
- 20 Kircher *Turris Babel*, p 21 "We read that these men came from the East and inhabited the plain of Shinar, and yet a certain prophet calls Christ "the East", saying "Behold a man with the name of East" It is fitting that those who withdraw from Christ by living evil lives are said to "come from the East "
- 21 Fishbane *Text and Texture*, p 33
- 22 Kircher *Turris Babel*, p 22
- 23 Cassuto *A Commentary on Genesis*, Note 46 (quoting from Rabbi Ammi)
- 24 Josephus, Flavius *The Works of Josephus*, p 72
- 25 Fishbane *Text and Texture*, p 19
- 26 Ibid
- 27 Vitruvius *De Architectura*, Book I, Chapt IV
- 28 Kircher *Turris Babel*, p 22 " "Notice," he says," that they came into the plain in which they stayed, but that they found the plain, that is, it was sought out by them in a greedy and inquisitive way, and it matched their madness completely That is how it goes The fool does not receive evil, but finds it himself by seeking it out for himself not content with those things which destitute nature inflicts, but adding to her woes by art and effort Would that having stayed there a little while, he had passed on to another place, however, he delighted to live there For Scripture says that having found the plain, they made their habitation there, as if it were their native land, and not at all as if they were denizens of a foreign land The evil would be somewhat less if, after they had fallen into sin, they had lived there as strangers and pilgrims, and not like kindred and native-born folk For as pilgrims they might have departed, but having once chosen their residences, they stayed on afterwards, having fallen into every kind of vice by keeping company with wicked men But the wise

- know that they are not native born in this world, but pilgrims, and they remember that heaven is their city and their native land'
- 29 Kircher *Turris Babel*, p. 21
- 30 Ginzberg, Louis *The legends of the Jews*, Note 88
- 31 Graves, Robert & Patai, Raphael *Hebrew Myths The book of Genesis*, p. 126
- 32 Kircher *Turris Babel*, p. 21 'Shinar means "breaking of teeth", or their stench Therefore they dwell in the plain of Shinar who, place not on the heights of virtue but in the flatlands of vice, shred their neighbors with the bites of denigration, and making their bed in the wallow of a slothful life, exhale the stench of their evil reputation all about God broke their teeth when he brought confusion simultaneously upon their words and their deeds, for of him it is written, "You have smashed their teeth", and again, "The Lord shall smash their teeth in their mouth" Another prophet has written of their stench, "The beasts of burden rot in their filth " For the beasts of burden to rot is for carnal men to finish their life in the stink of lust "
- 33 Saluste, Guillaume de *The Divine Weeks and Works of Guillaume de Saluste du Bartas*, lines 180 - 186
- 34 Kircher *Turris Babel*, p. 15
- 35 Frazer *Folklore in the Old Testament*, p. 362
- 36 Kircher *Turris Babel*, p. 52 "Hence it seems plausible that the city was very crudely built, the houses being fabricated along the daily movements out of the same material which was used in erecting the Tower On the basis of this experience, they made marvelous headway in building more ambitious walls, towers and palaces, as it were exerting the strength of their sharp intelligence, and daily they turned their minds to inventing things relative to architecture "
- 37 (Jonah 3:11)
- 38 Saluste, Guillaume de *The Divine Weeks*, The second week Line 102
- 39 Fishbane *Text and Texture*, p. 38
- 40 Ibid., p. 28
- 41 W. A. Irwin *The Hebrews*, p. 273 (From the Book of Judges)
- 42 Bowman *The Difference Between Greek Thought and Hebraic*, p. 139
- 43 Ibid., p. 137
- 44 Ibid.
- 45 Fishbane *Text and Texture*, p. 28
- 46 Ibid., p. 27
- 47 Ibid., p. 28
- 48 Vico, Giambattista *The new Science*, p. xx
- 49 Kircher *Turris Babel*
- 50 Parrot, A. *Ziggurats et la Tour de Babel*, p. 32
- 51 New Testament (18:16) St John in, Weiner, Sarah Elliston *The Tower of Babel in Netherlandish Painting*, p. 144
- 52 Bataille, George "the notion of expenditure", in *Vision of Excess: Selected Writings, 1927-1939*
- 53 it is double sided
- 54 Coins were important field of study for the Baroque scholar One of the more commonplace collections of that era were the *Cabinets des Medales et estampes* They were even held to be more worthy of an allegorical education than texts For as Baron Spanheim put it, the Egyptians and the Greeks were well versed in the ethical symbols, and the student of ethics would be better to use the symbols that were passed from hand to hand in order to instill a sense of symbolic ethics Aeneas Vico, the first engraver of the *Bembine Tables* (the hieroglyphs) and his contemporary, Guillaume Du Choul, both studied the implications of the double readings of the collections of coinage by providing two readings of a complete chronological collection (one for each side of the coin), thereby ending up with two bodies of text Allen, Douglas Cameron pps. 257- 262
- 55 Du Bartas *La Seconde Semaine*, p. 470
- 56 Kircher *Turris Babel*, p. 41

- 57 Parrot, A *Ziggurats et la Tour de Babel*, p. 2 (From The Attestation to Gudea Cylinder A trans by Witzel, P. Marus line 17)
- 58 Sprague de Camp, L. *The Ancient Engineers*, p. 43
- 59 Ibid., p. 54
- 60 Kircher *Turris Babel*, p. 59 (A liberal version of Diodorus)
- 61 Ibid., p. 62, citing Strabo "When the workmen saw that the trees which they wished to plant on the uppermost storey would not have sufficient earth, they left all the columns of the substructure, which he calls *Talos*, empty on the inside, and filled them with earth and clods so that the roots of the trees planted above, gradually worked their way down into these columns constructed as square prisms might hold firm"
- 62 Patai, Raphael *Man and Temple in ancient Jewish Myth and Ritual*, p. 84
- 63 Ibid., p. 66
- 64 Sprague de Camp 1 *The ancient engineers*, p. 53
- 65 Ibid., p. 58
- 66 Ibid., p. 67
- 67 Ibid., p. 64
- 68 Ibid., p. 57
- 69 Ibid., p. 70
- 70 Walton p. 28
- 71 (From St. Gregory I, in the commentary on the fourth penitential psalm) Kircher *Turris Babel*, p. 21 "Each and every man is either a citizen of Jerusalem or a citizen of Babylon, for just as the holy man becomes a citizen of Jerusalem through his love for God, so the wicked man, for love of this world, labours on the construction of Babylon. For in the construction of the edifice of the spiritual Babylon, the perverse follow the example of ancient Babel. As Scripture says, those who created this city had bricks instead of stone, and pitch instead of cement."
- 72 Kircher *Turris Babel*, p. 40 "It follows, secondly. If the wood from all the forests in the entire world were transported to one place, and if the whole globe were reduced to mud or clay, and if all the oceans and seas and rivers were turned to pitch, the wood would not suffice to bake the bricks, nor would the whole earth be able to produce enough clay or the sea enough pitch. In order to build this structure it would be necessary to create a new earth twice the size of the present one."
- 73 Salluste *The Divine Weeks*, The second week. Lines 145 - 150 (p. 425)
- 74 Ibid., Lines 151 - 156 (p. 425)
- 75 Weiner *The Tower of Babel in Netherlandish Painting*, p. 65
- 76 LeGoff, Jacques *La Naissance du Purgatoire*, p. 209 (By Hildebert de Lavardin, bishop of Mans in a sermon dedicated on the theme of psalm CXXII)
- 77 Archaeologists tend to conclude that the temple of I-~~HE~~ME~~N~~-ANKI is the original Tower of Babel as described by Herodotus.
- 78 Frazer *Folklore in the Old Testament*, p. 368 (From the inscription of the F-~~HE~~ME~~N~~-ANKI tablet)
- 79 Ibid.
- 80 Walton, John H. *The Tower of Babel* p. 83 (from The Nabonidus writing of SENNACHERIB (ANET 309i))
- 81 Parrot *Ziggurats et la Tour de Babel*, p. 174
- 82 Weiner *The Tower of Babel in Netherlandish Painting*, p. 191
- 83 Ibid., p. 32
- 84 Ibid., p. 95
- 85 Ibid., p. 189
- 86 Du Bartas *La Seconde Semaine*, lines 207 - 217 (p. 427)
- 87 *The Colloquies of Erasmus*, trans. Craig R. Thompson p. 379
- 88 Ginzberg, Louis *The Legends of the Jews*, note 88
- 89 Kircher *Turris Babel*, p. 124
- 90 Ibid., p. 30 "Let some spade up clay and others collect pitch, let others transport bundles of wood, other construct furnaces suitable for baking bricks, fashion tools

suitable for the work, let a host of pack animals be made ready, and let us begin, let the work blaze forth, and with the greatest carefulness and diligence observe those things which I shall command my architects, and they shall command you, to do "

- 91 Ibid , p 37
- 92 Ibid , p 37
- 93 Ibid , p 20
- 94 Ibid , p 29
- 95 Ibid , p 31 (From Josephus)
- 96 Frazer *Folklore in the Old Testament*, p 362
- 97 Kircher *Turris Babel*, p 40
- 98 Ibid , pps 40 - 41
- 99 Ibid , p 41
- 100 Ibid , p 29 Let us remain in the land in which Fortune, the arbiter of all things, has established us. Observe, and consider this territory of Shinar which we now enjoy "
- 101 Weiner *The Tower of Babel in Netherlandish Painting*, p 115
- 102 Riddle and Scott's Greek-English lexicon
- 103 Oxford English Dictionary
- 104 Walton, John H *The Tower of Babel*, p 31
- 105 Chamber's concise Latin Dictionary
- 106 Parrot, A *Ziggurats et Tour de Babel*, p 196
- 107 Kircher *Turris Babel*, p 40
- 108 Walton, John H *The Tower of Babel*, p 71
- 109 Kircher *Turris Babel*, p 41
- 110 Frazer *Folklore in the Old Testament*, p 367 (From the tablet of E)

Section II: Artificial Insemination.

The Limits of a Tyrant

Outside of the walls, the city perseveres, but in its transfigured form as a warring state. The military campaign is but a projected state of civility in locomotion. The logistical challenge is simply to place the city, with its essential components of agricultural goods, institutions, archives, etc., on wheels, and at the service of the campaign. Strategies of battle and troop deployment are all reminiscent of the founding rituals of the city state, like the first steps in architecture, foundations are laid, garrisons are constructed and positions are held. It is even said that the minor part of a soldier's life is the battle, while the largest is in building his home (the *Fox-hole*), and along with preparing and maintaining his weapons and war engines. All of these, including the engines of mobility, form essential components within the Vitruvian tradition.¹

If the city was invented purely for the sake of an individual destiny, as is Kircher's assessment of Nimrod's intentions, then coexistence among other cities would ultimately be a contradiction, for there was only intended to be one. Thus, in the post dispersion world, the cities -nation states of familial lineage- by definition, were forced to compete with each other for the singular status as *the* city. Lethal filial rivalry between states evolved into the traditional mode of conduct as related paternities desperately tried to outdo and obliterate each other for the sake of this exclusive legitimacy. As war fundamentally implies fratricide, Dante's punishment for the war monger, Count Ugolino, is the perpetual feast on his sons- the cannibalistic decimation of his own lineage.²

Each city regards itself as a totality, destined to absorb and constitute the multiplicity of humanity. But the presence of beings outside this totality reveals a limitation of its perceived infinity. To affirm itself, the warring nation must transcend the boundary (of its own walls, and ultimately the horizon) and bring the *other* into its perimeter.³ The paradox, however, is that the violence of war itself constitutes a fraternal relationship between adversaries. Firstly by seeking the other out as possibilities of a boundary infraction, and secondly by desiring their inclusion into the familial boundary.⁴ The fraternal nature of war is inscribed ultimately in the movements of our brawling bodies. Absence and presence coalesce to battle, we strike a blow at the immanent absence of the other, and they strike a blow at our receding target.⁵

To further compound the emerging state of paradoxical violence, the confusion can prompt the city towards a self destructive course of

misunderstanding. After setting out on a campaign to obliterate all other cities and propagate his lineage in the name of Babylon, Ninus, the son of both Semiramus and Nimrod, forgot his origin and invaded the city of his departure. The greatest danger to the paradigmatic state was the crisis of misunderstanding from within - the loss of civic memory. As the antidote to the emerging amnesiac state, the entire world would have to be re-named *Babel*, with its flag staked in the wake of every conquest.

Ninus was reputed, consequently, to have attached himself to writers who recorded his every move. The scribe is never far behind the military campaign, for the acts of the general are ephemeral, and easily forgotten. From the moment civilization began its journey of temporal decay, the scribe provided the key to national self-preservation. We romanticize the general who surrounds himself with the sagacious authority of the classical confrontations as we do the wistful nostalgia of the architect.⁶ But this sentimental characterization is not without foundation. Without the text there is no war, nor construction, and ultimately no city.

Architecture and war are thus vital in ensuring the monopoly of the imperial city. War is declared on the other's city in order to reconstruct it in one's own idolatrous image. Even Machiavelli considers the total destruction of institutions in another state to be more lasting than occupation.⁷

....records of time are destroyed by various causes, some being the acts of men and some of Heaven. Those that are the acts of men are the changes of religion (cultural state) and of language; for when a new sect springs up, that is to say a new religion, the first effort is (by way of asserting itself and gaining influence) to destroy the old or existing one; and when it happens that the founders of the new religion speak a different language, then the destruction of the old religion is easily affected.⁸ If the Christian religion (along with) its complete destruction of the antique institutions would (have) added a new language to this persecution, everything relating to previous events would in a very short time have been sunk into oblivion.⁹ Tuscany (as an example) then, as I have said above had its own customs and language, but all this was destroyed by the Roman power, so that there remained nothing of it but the memory of its name.¹⁰

Tyranny is an inversion of the dispersion, a desperate maneuver to coerce cultural unity. There are two choices in the conquering of a nation, and both lead to the dominion of the invader: either one obliterates it, or absorbs it into one's own citizenship.¹¹ The architect, then, is implied as the silent partner of the invading prince. His mandate, in these circumstances, is to ensure the means for a complete and lasting dominance of his city over all others.

The tower's idolatrous head was raised in the hope of seeing the horizon to its limit, while freezing its centre in place. Following the catastrophe, however, the head, bruised and lacking memory, remained immobile at the headquarters of the city, while the decapitated body dispersed into the volume of the horizon to recuperate the lost boundary. The feet marched aimlessly in all directions to claim the ground between the head and its limit of vision, the hands killed and imprisoned those unfortunate to be in the way, and lastly, the genitals forcibly impregnated the lineage of Babylon at every possible opportunity.

Genealogical memory is vital to the survival of the city. Without an enduring succession of lineage, the city is destined to self-destruct for lack of a head. In an enemy occupation of a city, entire families of civic leaders would be put to death. The current leader is hardly as important as the lineage, the king is the body, but the lineage, down to its last member, is the immortal body of chronological history. It is only by sentencing the lineage to death that the king is assuredly removed from memory.

The paradoxical implications of a city living in the contradiction between the mortality of humanity and its immortal needs are revealed in the transition of power between Ninus and his son. The death of Ninus contradicts the immortal obligation of the king. The son, then, is compelled to adopt the name of his father, Ninus, and the immortal body of the king. Thus *The King is dead! Long live the king!* But Semiramus, practitioner of the *impure coitu* and queen to the original king, beds her son, now in the hereditary body of her former husband, in order to preserve her own name and status as queen.¹² To perpetuate the immortal chronology of the city, Ninus(II) is obliged to comply. But what of the body of the original Ninus? Obviously its presence is contradictory to the life of his own son, Ninus(II). Only Ninus(II) can personify the king incarnate. Thus it is by necessity that the body of the dead king be excommunicated from the city. Like all other biological matter, the corpse belongs outside of the city walls, back into the agricultural cycle of the plains of Shinar.

Chronological time is limited to that within the boundary of the city, excluded from the natural world, it is sequential time rather than cyclical, particular to the state rather than universal. And yet the corpse cannot be ejected from the city like valueless rubbish, for it is still, paradoxically, the body of a monarch, the residue of an individual being. Ninus's Death is significant. It

signals the arrival of the corpse into the political museum of the tomb, a genealogy specific to the world outside of the city -the chronology of the dead. Thus there are two cities ruled by kings: the city of the living (*City of Man*), where immortality is embodied in the dispersed bodies of chronological time, and the city of the dead (*City of God*), where the immortal kings, or the Nunu, are present in a single collective body of one, in timeless space.

History is the prevailing expression of the Baroque self-consciousness.¹³ In order to comprehend any contemporary positioning of power, the prince and his actions have to be understood in the context of his hereditary origin.¹⁴ The Baroque tragedy was precisely this, the drama concerns itself with the life of the prince, but more specifically, his rank, his heritage, and the enduring virtues of his paradigmatic origin.¹⁵ Monarchy is considered as exclusive from the contemporary world. It is of its own temporal domain, fusing the prince, his ancestors and the prototype into one moment. It is a natural phenomenon -as natural as the original occupants of the ark, excluded from the city of man, and unencumbered by human reason (or lack of). The contemporary prince, then, is a pre-historical figure, more closely aligned with the natural kingdom than to that of man. It is for that reason that he, especially as a despot, is depicted in a bestial manner.¹⁶

As said above, the court is the timeless field of paradise, the same panoramic framework for the memory theatre, the frontispiece, the encyclopedia and the *Wunderkammer*. But among the allegorical objects strewn across the timeless landscapes are the portraits of the entire legacy of the court lineage. Here chronology is expressed as a catalogue rather than an historical list. For at the heart of the chronological matrix are the subtleties and nuances of breeding, intermarriages, linkages and bloodlines, vital to the understanding contemporary power. The catalogue of power is indeed an encyclopedia -a form of a horse breeder's catalogue of human insemination.

The royal court framed the timeless lineage of princes since Adam.¹⁷ Timeless, as in the tradition of the eternal pantheon of the gods, where chronological order, manifest in genealogy, was calibrated to simultaneity. Chronology in the Baroque must be seen in spatial terms. Epic poetry of royal heritage was often introduced in spatial constructs, such as fountains, towers etc.,¹⁸ the seat of power was commonly fashioned after the astrological temple (re Louis the *Sun* king). The court, then, institutes a direct contingency between

the spatial reference of the city and the clockwork of time. Through this, the understanding the spatial world (geographic nationhood) obtains the regularity of time (jurisdiction). If aristocratic genealogy is simultaneous, then nationhood (geography and territory) must be as well. A state lacking distinction in geography is a space without difference, a space not of a generic, but of a paradigmatic, order. The objective for genealogy and nationhood is that they be brought into a region of singularity, that they be read beyond the immediate, beyond even the historical, into the absolute metaphysics of theory -the fundamental substance present at both the origin and the end.

Time, in the coextensive universes of humanity and God, is governed by *Cottu*. The *City of Man* is, after all, ruled by chronology -a linear and segmented passage of hereditary power through a regulated genealogy of coital episodes. Time, however, is also the natural adversary to this human order. The edifice of hereditary power is perennially subject to decay by genealogical dispersion. As a result, *Cottu* in the human empire is to be strictly controlled, in the manner of the Hebraic *Toldot* -the spatial metaphor of the straight line, the *Lineamente* of power.

YAWEH was the first, last and only deity. As *Father*, and thus origin, of the *Toldot*, his singularity excluded the possibility of any divine conjunction. With the birth of Christ, heavenly time fused with the span of human chronology. The gods were taken from their timeless space and thrown into the *history* of spaceless time.

Described in another manner, the necessary apparatus of chronological time (human genealogy) was delivered with the invention of providence. Both Vico and Kircher concur in one matter, that inconsistent procreation, or *impuro cottu*, is at the root of a deteriorating human order. Subsequent to the fall of the Tower, humanity lost the capacity for speech (naming *names*) and, as a result, copulated uncontrollably on sight.¹⁹ The perceived *progression* towards order begins with the evolutionary origin of *Fertile* man, the Baroque precursor to our own *Homo Erectus*.²⁰ It was the haphazard dispersion of seminal code, and its resulting linguistic chaos, that prohibited the coagulation of genealogy into statehood. It is not until the emergence of a providential order within lineage that the capacity for speech could evolve and eventually lead to the dialectic of statesmanship. But it is especially with the advent of ecclesiastical prophesy

that the regimented order of *Coitu* emerged as the prescript for a perfected state²¹

**Nostis infelicem mundi ante diluvium statum, vidistis und mecum gigantum
immanitatem ante diluvium, inexplicabilem hominum in omni scelus,
flagitiorumque genere perversitatem, qua naturae limites longe excedens ad eam
impletatem ex sacrilego Sethianae stirpis cum Cainitica conjugio pervenit** 22

Barbarous behavior was the national manner in the pre-diluvium world. For this Kircher burdened the giant (an historical *other*) with accusations of profane actions, disgusting habits, and the sputtering of profanity.²³ But the corruption of the giant, beyond his sheer stupidity and brutality, was his practice of the *impure coitu*. Rape, sexual aberration, and permissive insemination, were not only the harbingers of *dis-order*, they were explicit transgressions beyond the limits of nature.

The delinquent giant was a hybrid of humanity and deity, the offspring of a contrived conjugation between the sons of gods and a human virgin. Its physical exception was the result of a sexual exception of two incongruous kingdoms. The architect, it seems, was charged with designing the summit of the Tower with this conjunction mind. Herodotus explained that the altar at the summit of the temple of Zeus Belus was really known as Marduk's *bridal chamber* where, every so often, he would descend to sleep with a native girl.²⁴ Further elaborated in Strabo's account of the same antiquity, the summit is described as a tomb where the god would lose consciousness in the ecstasy of death, only to reawaken in his procreated form.²⁵ Interestingly, the Hebrew word for Tower, *MIGDAL*, simultaneously depicts a nuptial chamber for the specific purposes of the *Toldot*. As a major concern for the Hebrew *Toldot*, human lineage was exclusive to the image of YAWEH alone. Thus the contradiction of a hybrid lineage, be it beast or god, is that its genealogical image breaks the bounds of nature by becoming idolatrous.

It is with the hybrid monstrosity that the universal fears of illegitimate transgression are culturally realized and deposited. The unbridled transgression of genealogy and its pending fall to bestiality threatens the treasured distinction between human and animal. This threat is best demonstrated by the Minotaur of Crete, whose conception was due specifically to the ingenuity and design of the architect. In her libidinous desire to bed the royal bull, queen Pasiphae

commands Daedalus, the court architect, to construct for her a seduction machine, a wood and leather costume fashioned into the likeness of a cow, to fool the beast into a copulate encounter.²⁶ The offspring of this zoophilic episode was a monster -the Minotaur. The architect, consequently, in providing the ingenuity for this unnatural act, disturbs the delicate entropy between humanity and nature, and in so doing unleashes a self propagating cycle of repercussions and invented responses. As with the seduction machine engendering the labyrinth, each gesture of artifice has its dialectical reply. It is in this manner that the perceived innocent mechanisms of artifice and invention unleash and alter a course of history.

Pasiphae's bovine disguise is composed of singular elements linked together to create a mechanistic whole. A simulated (idolatrous) being, it not only has the verisimilitude of an image, but as well, the illusion of movement (it is placed on wheels, alluding to the spatial movement of genealogy). If it may be called so, the simulacra is a reconstruction of the subject itself. Although its skeleton is built of wood, its surface anatomy is formed, part for part, from the original skin of a cow.²⁷ All the mechanical elements, including the feet, are assembled one by one, through an economy of dead matter, into a simulation of their live counterpart. The construct works within a paradoxical coexistence between the artificial and the real. In order to create the illusion of life, the artificer usually finds himself replicating the composition of life itself.

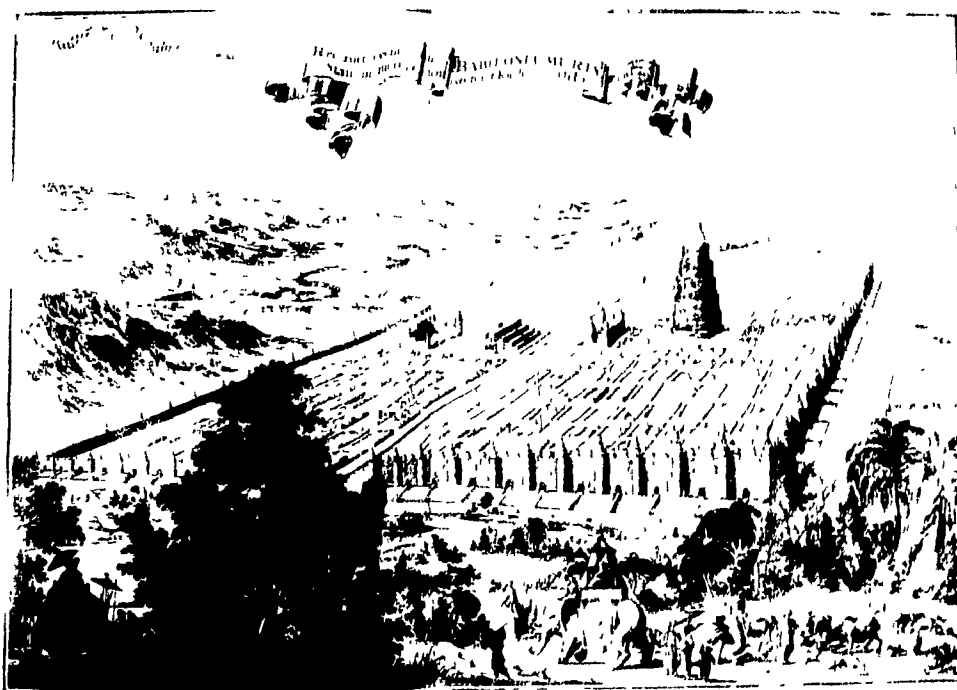
According to Kircher, the formula for Noah's divine federalism is a perennially dispersed and ordered *Toldot*, whose preservation is insured only by the discipline of prescribed marriage. Any orientation, or lack of, outside of the *Toldot* is destined to imprison the world under the lineage of tyranny. Tyranny is described by Kircher as being a family of unnatural succession, born in an orgy of sexual anarchy, and exclusive of blood relation and inseminate law. Aberrations outside these laws were not just sins of adultery, but an abuse of power.²⁸ Lineage, and thus power, is exclusively in the hands (or the testicles) of the male power, for it is completely dependant on the selected orientation of the seminal ejaculation. In a straight line, it goes east in the direction of the *Toldot*, misdirected, it turns on itself, like the winding paths of the labyrinth to form the city.

In addition to the distinction of being the first in this family of tyrants, Nimrod was also the first intentional practitioner of the *Impuro Coitu*.²⁹ Any form

of sexual malpractice -buggery, homosexuality, zoophilia, rape etc - outside of the patriarchal structure of the *Toldot* was seen by Kircher as belonging to the inventory of his repute The Chaldean/Syrian equivalent to Nimrod is *Belum Bel*, at its root, describes Nimrod as being a *Robust* giant with an inclination towards the libidinous practice ³⁰ *Baltis*, the etymological namesake of the city of Babylon, is the Assyrian equivalent for the love goddess, *Venus* ³¹

There are few, if any, female tyrants in the Judeo-Christian tradition In the instances where they do appear, they either feign masculinity, as with Semiramus, or they act as hyper-recipients of the genealogical seed

the great, the mother of whores and of every obscenity on earth³²



The City of Babylon.
Kircher *Turris Babel* p 146

Babylon was renown for having ritualized prostitution as part of the temple ritual. It is the first nation to introduce intercourse as an economy of surplus Its prized merchandise was the illicit misdirection of genealogy, and thus, chronological time The city was a vessel that accepted, like a commodity, the semen from the entire world The Babylon of the Revelations was an encyclopedia of the entire spectrum of perversions, misdirecting all ejaculations

into temporal dead ends. The Christian chronology ends with the *whore* of Babylon. In the final timetable of the Apocalypse, the *whore* is to bed all the kings of the world, and in so doing, stem the course of chronological time with her seminal encyclopedia.³³

Consistently, exegetic scholarship had identified Babylon, and subsequently Rome, as the locus of evil. It was built by the devil to contrast the city of God,³⁴ it was the reputed birth place of the Anti-Christ,³⁵ it was the seat of the *Whore* who was to induce apocalypse through her coital manipulation of the seeds of power.³⁶ Even the Protestant critique of the 16th and 17th centuries discovered Babylon to be the choice metaphor for their attacks on the Papal See, specifically accusing its members of being agents of the *Whore* herself.³⁷

Babylon, then, was not only the centre of libidinous enterprise, it was the veritable museum of perversion and fear. The *whore* represented the worst possible scenario for a patriarchal chronology, for she would willingly devour the entire project of the Judeo/Christian *Toldot* and surrender it to their greatest fear: the woman.

The Idolatrous Prototype

Noah

First monarch of the new age;³⁸

Paternal commander;

Restorer of the Human race;³⁹

First holy Roman emperor;⁴⁰

King progenitor;

King of all.⁴¹

As described by Kircher, Noah is the *prototype* for rule. He is the *norm* or the measure of all things associated with it.⁴² Like architecture, the monarchs pass their measures sequentially through the itinerary of subsequent generations. Each monarch assumes with title, the standard of measure, becoming within their own generation a *prototype* for the next.⁴³

Rule under normal circumstances is a natural principle, but tyranny, Kircher explains, is a human invention. Tyranny is a bloodless lineage: the pursuit of tribe by all means other than the *collu* of a legitimate genealogy. Thus lineage is criminal, perpetuated by the machinations of coercion and tyranny itself.

The tyrannical prototype originated with that of the Tower. In Kircher's critique of the chaotic politic of Babylon, the deficit in leadership is bound to the deficit of a clear prototype for the construction of the Tower; each citizen, Kircher explains, had their own personal vision of the project.⁴⁴ As the din of persuasion and heated debate over which of these ideas was in fact the legitimate model enveloped the site, tyranny insidiously crept into the city under the guise as the antitheses to anarchy. It is by Nimrod's gift of eloquent soliloquy, and hypnotic conviction, that the headless tribe adopted his own plan as the singular course for the project. In order for one prototype to supersede, society must willingly consolidate its power into the propriety of a solitary head. By the lessons of the *Trauerspiel*, the potential for totalitarianism is the only assurance for reaching these national goals. In Noah's case, absolute rule ensured the proper conduct of the *Toldot*. Without the model, power cannot be assumed, and without power, the model cannot be realized. Even among ourselves, we elect our leaders to *power* for the sake of a *Prototypet* (an election platform) to which we willingly submit our obedience in the national interest.

"Omne consilium suum illis aperuit, eos in omnibus, quae dictam fabricam concernerent, exequendis, quam diligentissime instruxit, mensuras totius fabricae praescripsit, modulum, sive prototypon e ligno, vel argilla essetum ut secundum illud se dirigerent, ostendit, siquidem verisimile est, eum uti erat sublimi iudicio pollens, tantae molis opus non temere, & tumultuaria quadam resolutione, sed maturo, & quam deliberatissimo animo concepto jam a multis annis confilio inchoasse"⁴⁵

Like the making of idols, the plan is revealed as a *likeness* of wood or clay.⁴⁶ It is ironic that the first idolatry is prophetically in the form of architecture. Providence is read in the talisman from the mind of the ruler -the model.⁴⁷ For the ruler, it is hoped that from the likeness of his design alone, all the succeeding editions would be engendered. There is little doubt why, then, Nimrod instructed the citizens to build a city as the model for all others.

"...ut unanimiter magnam quandam civitatem extruerent, quae veluti altarum omnium mox in aliis regionibus aedificandarum caput.."⁴⁸

"...fodiamus, jaciamusque fundamenta juxta prototypon hujus a me jam dudum conceptum, omnium & singularum partium operis consciendi proportionem."⁴⁹

The model is a play -a machine, an automaton embodying the entirety of the proposed object in space- in its proportion and its itinerary of work, from start to finish. It is a scaled specimen -a monad to be projected into the project by providing a demonstrative instruction towards a final end, and implicating itself as a component of the outcome. But in human hands the proportionate trajectory from prototype to realization is doomed to failure. Artifice seems bound to the invention of the prototype, where theory is the model, practice is the task of controlling its projection into matter. Even in its realized state, the prototype is never complete. Nothing in the human realm is totally paradigmatic. Chronology deteriorates the matter of the world, and with it, the execution of the idea. Yet the prototype, as a paradigmatic standard, remains vital to participation in the work. The task of human artifice is thus the search for the ever elusive paradigmatic form -the pursuit of the revised prototype to meet the standards of the original. The kings pursue their genealogy to link themselves to the original model in the form of Christ or Noah. The Tower, born as a prototypic institution, allegorically survives its physical death as do the princes. The prototype insures the continual rebirth of the intention regardless of the deterioration of its editions.

Thus if *The King is dead' Long live the King'*

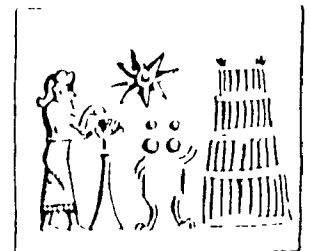
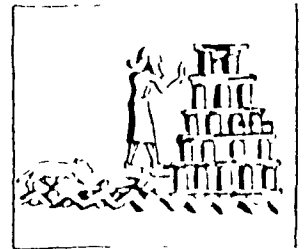
Likewise, if *The tower is dead'* then, *Long live the tower'*

The sequence of events that provoked the comical failure of the Tower began with the labour of brick by brick construction. The builders proclaimed the project with the call to make bricks and names *for themselves*.⁵⁰ It is here, in this a niguous calling, that the crime of hubris originates.



"Merito autem, qui in Sennaar habitent de lateribus civitatem aedificant, quia qui voluptatibus carnis nserviunt, de fragili materia mentis mutationem attollunt. Qui autem carnalis vitae abdicatis illecebris per opera sanctitatis, virtutum in seipsis sanctificationem aedificant, hi profecto lateres in lapides mutant, qui cum Isalla possunt dicere, Lateres ceciderunt sed quadris lapidibus aedificabimus, lateribus quippe cadentibus, ille aedificat lapidibus quadris, quicumque carnis lasciviam discipline strictioris rigore castigat, qui membrorum legem mentis lege superat: qui corporis fortitudinem in virile spiritus roborexitat, quasi lateris in saxa, quibus muri Hierusalem aedificentur, commutat."⁵¹

Allegory begins with the *translation* of the building materials. The artisans form counterfeit concoctions (new words) to appear as substances natural to the building trade. The bricks are translated into stone, bitumen is translated into mortar.⁵² But beyond translation, the making of a brick is even a mockery of the Ark (the lexicon) endeavor especially when the Tower was said to have been built as a *high ground* for the expected second inundation. Traditionally, the region of Babylon (now Iraq) used fired brick, covered with the commonly found bitumen, specifically for the purpose of waterproofing. The high porosity of these bricks allowed for a large absorption of pitch, making them unbelievably strong and impermeable.⁵³ In Biblical terms, however, the making of bricks was not seen in such a practical light. The mud used in their production was laced with the lost generations of the deluge. Like the initiation of agriculture, any exploitation of this dead matter was destined to be a commitment to a redemptive existence. Even the *firing* of matter to exhume moisture was a provocative gesture aimed specifically at the waters of the deluge. To *burn to a Burning* implied a destructive sorcery in the spirit of a burnt offering.⁵⁴



Assyrian Cylinders
depicting the building
ritual
A. Parrot, *Ziggurats et la
Tour de Babel* pps. 43-45

The practice of brick manufacturing takes a radical departure from the paradigmatic forms of construction found in the Old Testament. Artifice was limited to the adaptation of natural materials (the lexicon of the Ark), such as skins, woods, and stones, in the fabrication of a desired article. The order of such work was in sacrificing the excess of nature in order to arrive at a geometry of prescribed boundary, -the excess of a tree is removed to leave the *squared* planks of the Ark, stone is *dressed* to be laid in the Temple of Solomon, and animal skins are *trimmed* to leave a rectangle of material for the curtains of the

tabernacle. The invention of bricks, on the other hand, implied the creation of a new species, and in so doing, a new language: *a Name for themselves*. The brick proportionate module is entirely conceived of in the hands of humanity, and not from the order of a natural scale. Where most architectural paradigms of the Old Testament have clear proportionate limitations (the Ark, the Temple of Jerusalem, and the Tabernacle), the proportionate order of Babel is potentially infinite and uncontrollable.

In the construction of the temple of *Ltemenanki*⁵⁵ (also the Tower of Babel), king Nabopolassar would inscribe every brick with his name and the statement, "*Let the performance of my Hands endure forever*." According to the Epic of Gilgamesh, the speculated source for the phrase *come let us make a name*,⁵⁶ reputation and name are the means for immortality. But even beyond that, the fusion between the state and the slave is ensured forever by having each builder inscribe their own name on every brick they touch alongside that of the king.⁵⁷ The cycle of absolute rule is not only defined by an order of command and obedience, it is derived from an eternal deed of proprietorship between the king, state, and the citizen.⁵⁸

The mold maker is the privileged role of the king. It bears his stamp, his consecration, above all else, it is the one detail that is critical to the success of the enterprise. Only the king alone may design the prototype of the entire order of divine measure. Like a monad, the project is embodied as a model in the smallest element of the construct. The Babylonian tradition of making the mold, consequently, was a religious ordeal of the highest order and solemnity, in which the king played the central and commanding role.⁵⁹

The brick is the prototypic body of the king. Its creation parallels that of man. In the Babylonian Genesis, Marduk forms man out of clay from the UZI MA (the bond between heaven and earth), the sacrificed blood of the gods, and dust.⁶⁰ Even our own version of the human creation complies. God created Adam (*One that is red*, in the Hebrew tongue, alluding to the red earth) by taking dust from the ground, making it into clay and imbuing in the form, a spirit and a soul.⁶¹ The clay that is to form the brick is a microcosm of the entropic biology of man and earth. The brick mould is filled with clay and fed with the sacrificial libations of herbs, oils, and alimentary products, while the mortar is mixed with wine, and sacrificial blood.⁶² Even Nabopolassar was said to have sacrificed his own son to the brick mixture as a contribution to its corporeal substance.⁶³

The implications are that the molds are intended to produce millions of miniature idols or simulacra in the image of the king. The authentic mold of God produces a singular likeness of himself through lineage, while the king produces prodigies of himself in volume. As God is to man, the mold is a paternal origin to the brick.⁶⁴ Each brick is an idolatrous offspring of the *prototypic* mold as designed by, and property of, the king. The mold in itself is the measure of the aggregate totality of the project, and the embodiment of the genealogical immortality of the sovereign. The maker of the brick breaks away the mold at dawn to resign his handiwork to the intensive scrutiny of the sun. If the image is deemed appropriate then the brick will harden.⁶⁵

In making the bricks, the king subverts human genealogy by attempting to define a new symbolic mortality of his own control. By completely reinventing the human body in the form of a brick, the king makes the city, the nation, and the populace, truly his. The name is imprinted on them and from that moment they are his slaves, for they bear his stamp of ownership. They are made from the ancestral remains of the deluge, they are fed through the libations, and finally, they are given names. Even the human slaves that construct his tower are equatable with the bricks themselves - little more than surplus for economic exchange. The value of a brick supersedes human life in its priorities, a woman would not be permitted to interrupt her brick making in order to give birth, if a man was to fall and break his neck, they would weep for the brick that would take one year to replace rather than the loss of a comrade.⁶⁶

In referring to the attempted assassination of Hapsburg emperor Leopold I, Kircher expresses the more sinister implications of the assailant's deed

"Videbantur novi ab inferis resuscitati Calligulae, qui uti unicam Romano populo cervicem optabat, ut ad sitim suam cruentissimam abundantius explendam caput orbis ictu unico decussum humi prosterneret: sic isti longe foediores nequitiae & furoris satellites immani gigantomachia in sacrum caput tuum, caput scilicet orbis Christiani funesta perfidie ac livoris tela omni flagitiorum venenorumque tunc imbuta."⁶⁷

Crucial to the survival of the Austrian empire, is the *head*. Any menace to it is a menace to the state itself.⁶⁸ When the king dies the city literally loses its head (of state) in the hysteria of civic mourning. The power and legitimacy of the state resides in the physical apex of the human body. Moreover, the original civilization is divided by Noah into tribal *heads*, while we democratically count *heads* to arrive at consensus.

simulacra. Thus a significant dimension of the *daidalon* is the construction of statues that are deemed to be alive.⁷⁷ But with respect to both the Tower and the *daidalon* (as statue), the magic of their artifice is in conjuring the *image* of life, rather than the creation of life itself. Idolatry is a devotion to the fabricated image and likeness of a deity. For the synthetic to be truly alive, the true criteria for likeness would rest in the illusion of life rather than an enterprise towards a living end.

In the Hebraic world, YAWEH is personified as a great potter,⁷⁸ and later in the early Christian tradition as a great architect. This would seem to imply that artifice is a natural practice condoned at even the highest level. Yet in Hebraic thought, the exploitation of nature has idolatrous implications. Nature is the work of Yaweh alone. His *appearance* is indirect. When he does appear it is hidden among the visible evidence of his reality: the elemental world.⁷⁹ YAWEH is not terrestrial, he is distinctively above nature. But since it is by his design, only he has the power to transform it.⁸⁰ YAWEH has a full monopoly on transcendence. Thus any attempt to symbolically alter matter by artifice is, in some regards, a transgression. To fashion an image out of wood is a violation of YAWEH's monopoly.⁸¹ Matter and image, in their exclusion from human propriety, hold little potential for engagement in what we understand as ancient artifice in the western convention. As a consequence, the participation of humanity with nature is exalted to a level beyond material artifice, to the contemplation of the mind and the articulation of culture.⁸²

The implications of the Hebraic condemnation of idolatry have a significant resonance in the Baroque. As an extension of idolatry, Hebraic thought regards nationhood as groundless. There is no Hebrew geography for they can claim no legitimate title for ground. Nationalism is nomadic, explicitly groundless.⁸³ The Hebrew nation is not staked out with a spatial boundary, rather it is chosen as an absolute state defined by the temporal boundary of generations. Other states are accepted, but regarded as ephemeral and inconsequential to the larger destiny. The Baroque consciousness parallels this questioning of state, for it is in this period that the estate of human ancestry is proposed to extend beyond geographic boundary, that the origin must be universal in order for it to be legitimate in the face of diversity. At the same time, the modern nation emerges with this same question concerning historical legitimacy. Nationhood is a true

dialectic in Baroque thinking, where oligarchy asserts the historic legitimacy of geographic border, the community of scholarship is anxious for its dissolution, asserting the progressive target of a borderless knowledge. In its largest temporal scope, world culture is essentially nomadic -a *diaspora* of humanity, rather than of a single race. At the same time, moreover, the cultural endeavor is shifting from the permanence of geography and architecture to the more appropriate scale of science, language, and racial history. The perceived tactility of the phenomenal world is converted to an apparitional prescience of an intelligent higher order. Like Hebraic artifice, the Baroque material work is but the surface of a cognitive artistry more appropriately articulated in the contemplation of theory than in matter.

Humanity began with one original God, and one original language. Along with language, however, the dispersion disrupted the one God into a collection of many. In Kircher's eyes, the pagan religions that dominated antiquity were all in fact heretic derivatives of the original Adamic faith. The gods and language of Greece and Egypt, thus, could be traced back to the misrepresentation of Adamic culture by the family of Cham, the builders of the Tower.⁸⁴ It is to this tribe that Kircher credited the introduction of idolatry. In leaving the identity of the singular, to become that of the many, the gods become idols -images whose appearance alone became the substance of their presence. Such images became so real that cities will plundered each other for their statuary, or, more appropriately, the simulacra of their gods. It was only with the emergence of a pantheon of images that language lost its immediate disclosure of the Adamic tongue. Language was consumed with the search for images representing lost expressions. As a result, Kircher concluded, that allegory was to adopt the idol to form the mystical images of the hieroglyph.

"Infelix illud inauspicatumque stolidissimae arrogantiae exemplum hic ego in scenam produco; atque utinam illud ita universis possem statuere ob oculos ut videant, quam tragica semper in hoc ambitionis theatro scenam claudat catastrophe; perspiciantque, non ullam posse expectari coronidem operis quod molitur impietas, quam cumulum tumulumque, qui auctorem nescientium moliminum eadem secum ruina conspeliat."⁸⁵

The royal court of tragic theatre is in the perennial shadow of its eventual destruction. At the centre of this scene is the king, whose omnipotence

is gauged by his maneuverability in the proximity of the impending Apocalypse⁸⁶ With this menace as the potential outcome of every action, he was judged by his ability to balance the extreme traits of the benefactor and the tyrant -a legitimate oppressor in times of peril⁸⁷ Considering the extent of political violence in the dynastic and religious wars, tyrannicide was a vital concern to the cultural commentators of this time⁸⁸ Crucial to this was finding the historical authority to depose of them in a legitimate manner The fear of tyrannical doom, and the determination to subvert it by legitimate means, was reflected in the intellectual and legal strategy of the nascent propaganda institution The Golden past, however, was pessimistically regarded as an age completely out of reach Paradoxically, tyrannical rule was considered a potentially acceptable manner in redeeming this loss, for it allowed the state the option to impose the harshest measures in order to stem the threat of slipping into apocalypse⁸⁹

The king could thus be martyred for the sake of the state, for it is only by the grace of his tragic self sacrifice that the state retreats from the precipice of destruction The power of the state is concentrated in his figure, not only by blood and divine right, but by this inherited characteristic of sacrificing his own flesh for the its sake The paradigm of the ideal martyr, as in the exemplum of the Crucifixion, is herein destined to be replayed as a hereditary characteristic of the king⁹⁰

The *Trauerspiel* is grounded in history as opposed to classical myth It follows a descent into metaphysical damnation resulting from a political action, or, for that matter, any gesture that affects the historical evolution of the state⁹¹ It is a national sacrifice, a final atonement for unleashing the course of history into nationhood⁹² The Tower of Babel, likewise, is a national sacrifice for the introduction of a new order Yet, as we see with Nimrod, the ruler is a product of history, his downfall is an historical, rather than a personal, tragedy His pain and lamentation, then, is not so much a cry for personal sympathy, but for a public mourning⁹³ Only the king mourns for himself For in the course of his discipline of power, he is stripped of all his creaturely and human attributes⁹⁴ As the hero falls into self imposed silence, he is expelled from communion with both god and his own people⁹⁵ A pathetic figure, the fallen king is reduced to a silent voice in the legacy of history⁹⁶

By the above definition, then, Kircher's Nimrod can indeed be seen as a tragic figure in the tradition of the *Trauerspiel* Just as actors adopt the timeless

role of Falstaff, those who embrace his characteristics are destined to live out his tragedy by virtue of a determined script in the theatre of history. Whoever adopts his image will inevitably follow the same course. Ironically, it is Nimrod who is the first to make an idol, and the first to make an idol of himself.

Led by the progenitor of revolt, Nimrod, the war against Heaven begins with the effacing of the Adamic language in the hunt and slaughter of animals.⁹⁷ In this battle the autonomy of the individual is sacrificed, idolatry gives birth to the imitation of another. Indeed, Nimrod's leadership is earned by the sake of his idolatrous image alone.⁹⁸ He is the first of the leaders of corrupt men by his example.⁹⁹ His revolution only attracts those who are like minded, eventually composing his genealogy of criminals -not by blood but by imitation.

Nimrod's Head

Nimrod (nɪ - mɹɒd) Also 6 Nemroth, -rod

1 A tyrannical ruler, a tyrant

2 A great hunter, one who is fond of or given to hunting



Portrait of Nimrod.
Kircher *Turris Babel* p 112

As Babylon long stood for the *City of Man*, the leadership of tyranny was personified in the name *Nimrod*. In political treatises between the 14th and the 17th centuries, he was the choice personification of the contemporary tyrant.¹⁰⁰ The name of the prototype is projected on to the figure, thereby absorbing the entirety of his actions into a predictable scenario. When the protestant forces claimed a large portion of northern Europe, the critic lamented and moralized on *Nimrod's* expansionism into the territories outside of *Shinar*.¹⁰¹ Even Petrarch, in reproach of the papacy in Avignon, referred to its castle as the *Tower of Babel*, and the pope, Clement VI, as *Nimrod*.¹⁰²

The figure of *Nimrod* is thus but an engendered composite drawn from the exegetic legacy of the *Tower of Babel* episode. The prototype is gradually shaped from the figures of our cultural experience, some noble, as in *Noah*, and some ignoble, as in *Nimrod*. In this respect, the name is less of a title for an individual of repute than a noun depicting the consequences of an entirely human trait. If the confusion would seem to begin with the tower, it is ironically embodied in the name itself.

Nimrod's (*Nembrod*, *Nibrod*, or *Nemrod* in contemporary variations) titular genealogy begins with the Assyrian words *Nimra* and *Nimurata*, the nouns for a hunter.¹⁰³ Monuments dedicated to the god *Nimurta* (also known as *Murudash*) depicted him as a hunter, killing lions, bulls, and serpents.¹⁰⁴ It is from here that the name *Ninus* originates. Clementine of Alexandria credits *Ninus* with the construction of the Tower. But the paradox is that *Ninus* is *Nimrod's* son, according to St Augustine. Clementine's *Nimrod* (*Ninus*) is attributed with the birth of fire worship in Persia. *Zoroaster*, the living star, is the remnant energy of the magician who inspired this celestial worship.¹⁰⁵ As the story goes, *Zarathustra* (*Zoroaster*) devised fire altitudes in dissent of God. In his ensuing spectacles, *Zarathustra* (also known as *Asuthros*) ignited himself and ascended into heaven as a ball of fire.¹⁰⁶ Ironically, the constellation of Orion, depicting a hunter, goes by the name *Nimrod* in Persia.¹⁰⁷ The Hebraized version of *Nimrod* is derived from the verb *Marad*, to rebel. Lastly, the Old Testament implies that *Shinar*, commonly understood as being ruled by *Nimrod*, was also ruled by *Amraphel*. The Babylonian tablets describe *Shinar* as being ruled by *Hammarabi* (also known as *Targum*) whose Hebraized name is *Amraphel*. It is the conclusion of most exegetes, however, that *Nimrod* assumed the title of *Amraphel* upon the acquisition of this territory.¹⁰⁸

Introduced into the Old Testament as the *Mighty Hunter*, *Nimrod* was the first to exploit nature by way of deception. Under the cloak of camouflage, he would ambush and consume his prey. This is, after all, the lineage of the artificial, where flesh is replaced by simulation, and the prototypic image replaces blood. But the real credit for this power of deceit is attributed to his apparel. *Nimrod* dressed in the skins of a giant leviathan, originally given to Adam and Eve following their ejection from paradise.¹⁰⁹ Those who wore these

garments were made invulnerable and irresistible. Its illusion was ultimately so convincing that even animals were said to have fallen in supplication upon seeing him.¹¹⁰

The garment is an allegorical prosthetic, the superficial skin of the criminal lineage. From Adam and Eve, it went to Cain, from Cain it went to Enoch, from Enoch to Methuselah, from Methuselah to Noah. But following the deluge, Ham is said to have absconded the garment from a sleeping Noah, and finally given it to Nimrod, his son, on the occasion of his twentieth birthday.¹¹¹ Furthermore, one version of Nimrod's death, claims that he was murdered for these garments by Jacob's son Esau. These made him strong until they were buried by his father.¹¹² Upon their rediscovery, they continued along a clerical genealogy to become the formal garments of the Assyrian priesthood.¹¹³



Semiramis and Ninus on the Lion Hunt.
Kircher *Turris Babel* p. 57

The hunt was primarily a sport, more of an exploit serving vanity than subsistence, prey for the sake of prey. Adam created language by naming the natural world. The Ark was its dictionary. Thus, Nimrod, in being the first to hunt, eat, and sacrifice the flesh of an animal,¹¹⁴ was engaged in the devouring of the original language (the names of animals), and replacing it with his own

(making names for himself) This is the first war, the first culture to be obliterated for the sake of his own

Traditionally, the aristocracy are avid practitioners of the hunt. But this is more than just a pastime, for the hunt is in fact the closest activity to warfare Machiavelli explains

.....As for the first, besides keeping his men well organized and trained, he must always be out hunting, so accustoming his body to hardships and also learning some practical geography: how the mountains slope, how the valleys open, how the plains spread out. He must study rivers and marshes; and in all this he should take great pains. Such knowledge is useful in two ways: first, he obtains a clear understanding of how to organize his defence, and in addition his knowledge of and acquaintance with local conditions will make it easy for him to grasp the features of any new locality with which he may need to familiarize himself.....so with a knowledge of the geography of one particular province one can easily acquire knowledge of the geography of others. The prince who lacks this knowledge also lacks the first qualification of a good commander. This kind of ability teaches him how to locate the enemy, where to take up quarters, how to lead his army on the march and draw it up for battle, and lay siege to a town to the best advantage.¹¹⁵

War, the hunt for *human* prey, was but the next logical step in the evolving dominion over nature. The tools and intentions of war are only slightly more elaborate variations of those intended for the bestial hunt.

Then Nimrod snatching fortune by the tresses
Strikes the hot steele; sues, soothes, importunes, presses
Now these, then those: and hastning his good hap
Leaves hunting beastes, and hunteth men to trap
For like us he in former questes did use
Cubs, pit-falls, toyles, sprenges, and baltes, and glewes:
And in the end against the wilder game
Clubs, dartes, and shaftes, and swordes, their rage to tame:¹¹⁶

Nimrod's war stripped the victims of their humanity and reduced them to the level of bestial, even edible, quarry.

Who, worse than beastes, or savage monsters been,
Spares neither mother, brother, kiffe, nor kinne:
Who, though round fenc't with gard of armed Knights
A-many moe, he feares, then he affrightes:
Who taxes strange extorts; and Canniball
Gnawes to the bones his wretched subjects all.¹¹⁷

He tyrantz'd among his stripling - peeres,
Out - stript his equals, and in haple hower
Layed the foundations of his after - power:
And bearing reeds for scepters, first he raignes
In prentice - pryncedome over shepperd swaines.¹¹⁸

The first standards of rule were allegorical projections of purpose onto natural articles, new names for the lexicon of the potentate. Under these provisional emblems, Nimrod assumed the distinction of being the first monarch of the first kingdom on earth. His ambition of being sovereign of the world went essentially unopposed, due to the novelty of his approach to power.¹¹⁹

Nimrod was said to have *seduced* the headless tribe into the Babel project with his bewitching words and natural eloquence.¹²⁰ Described as a *famosus gigas* (famous giant),¹²¹ his fame (*fama*) adhered his name to the lips of every citizen. Like the hunter's animal call,¹²² his mention mimicked the prophetic voice of God.¹²³ His exhortation was a political masterpiece, for it was said to have wooed the hearts of the people.¹²⁴ All of his attributes - beauty, prowess, robustness, strength, eloquence, perspicacity of mind, and haughty spirit - imply a character whose disposition approaches the erotic. With this in mind, his attempts to persuade the tribe of his position can be seen to be two handed: on the one, it is a ruthless oppression and persecution of dissent, while on the other, it is the seduction of a courtship. Nimrod is antithetical to the hermaphroditic angle, his message is self-inspired, and his gender is designated only by opportunity. As discussed before, it may be speculated that the *impuro coitu* is a sexuality of diverse orientation - an orgy in explicit contradiction to the heterosexual definition of lineage. It will be due to this prototypic influence, then, that Babylon evolves into a culture consumed by pleasurable goals.

**Under a Tyrant to consume one's age,
A self - shav'n Dennis or a Nero fell,
Whose cursed courtes with blood and
Incest swell.**¹²⁵

Speculation of this composite portrait of Nimrod thus leads one to the recognition that a violation of the natural boundary will be condemnable as a transgression at virtually all levels of divine law. Nimrod's unprecedented despotism is a breach of all the limits of this natural law, alimentary (cannibalism), seminal (impure coitu) and homicidal (fratricide, matricide and patricide).

Nebuchadnezzar's Nightmare

Nebuchadnezzar has the nightmare of monarchs

He dreams of a giant effigy, the statue of a king, like himself

There appeared to your majesty a great image. Huge and dazzling, it stood before you, fearsome to behold. The head of the image was of fine gold, its chest and arms of silver, its belly and thighs of bronze, its legs of iron, its feet part iron and part clay ¹²⁶

This vision is the monarch's greatest, but inevitable fear – the anatomy of chronology in effigy. Beginning with the head of gold (the golden age), the body of the immortal king approaches corporeal decline with each successive age, until its most degenerate iteration (and ironically the most structurally crucial) – the feet of iron and clay (the barbaric age). Out of desperation, Nebuchadnezzar tries to bring the vision to life by constructing it out of gold, but the failure of his construct is inevitable. For it is an image without any hope for realization. The true nightmare for Nebuchadnezzar is the unavoidable recognition that regardless of the immortal measures taken – insemination, idolatry and monument building – the body of the eternal monarch is ultimately ephemeral, destined to disappear with time. Spread out and disembodied among the landscape of linear chronology, the body is impotent in its dismembered components. Only by instituting chronological insemination could there be any hope for the resolute completeness of the prince. Monarchic lineage (genealogy) is the last resort in the desire to render the mortal immortal. To add insult to injury, it is only in the atemporal world of the nightmare that the body appears whole.

The king seeks immortality by sending his name towards the antipodes of linear time. Towards the origin, he leaves his name in the posterity of reputation and architecture. Towards the apocalypse, he sends his name with his lineage. In Kircher's view, the vain attempt at an enduring memory, by *making a name for oneself*, is the root of all human discord ¹²⁷. This ambitious desire to survive beyond a lifetime is specifically embodied in the misguided adventure of architecture. For even if the building was to weather the corrosion of time successfully, the longest lasting names are usually the most infamous. There is nothing on this world which is permanent, claims Luther. For this reason, the eternal intention of architecture, typified by the tower of Babel, serves only to perpetuate what he saw as the heretic madness of the world ¹²⁸.

The works of man challenge the inevitable forces of death, erosion and the isolation of dispersion. Yet in the final analysis, these enterprises eventually lead to the fulfillment of their original tears.¹²⁹ YAWEH's retribution for transgression is directed at the intention behind the enterprise itself. For example, St. Gregory argued that the Tower would be destroyed by a *simple blow* (of wind) *sapped from beneath*.¹³⁰ Not only does YAWEH's vengeance assert his dominion over the heavens, but as well, his blow strikes at the intentional heart and static core of the tower: its foundation.¹³¹ Thus, for Kircher, in addition to being being efficacious, God's revenge will be a didactic expression of his destiny. The condemnation of Babel is an inspired artifice, whose artistry of destiny is only to be revealed a posteriori by the observations of exegetic scholars. Ownership never was, and never will be, perpetual.¹³² For after the fall of the Tower, YAWEH distributed territory by lot. Hence, proprietorship will suffer not only physical, but even legal, decay. Legal ownership relies ultimately on the *name*, and the name is destined to be lost in the forces of the dispersion.¹³³

To Kircher, Rome was the evidence of this ruinous itinerary.

Cernuntur hic Romae quotidie, in sanae fabricarum moles a veteribus exstructarum, non nisi cadavera semisepulta inspiets. Putabant illi, exstructiones aeternum duraturas se moliri: Verum jam vix 1600 anni praeteriere, cum non nisi vestigia earum supersint.¹³⁴

In a cultural mandate challenging the ephemeral world, Babylon's (Rome's) fate is apocalyptic. Age, war, competition, and the collision of an infinity of rational orders, leads directly to the cataclysm of the original tower. Even the lasting name of proprietorship evolves into the confusion of tongues.

Mollebantur turres, quarum fastigia in coelum transcenderent, sed vel confusione mentium impediti, vel morte praeventi, vel bellorum tumultibus exagitati, quod intenderant, perficere nequiverunt. Hoc pacto iniqua mortallum fors versat vicissitudinis rotam, ut nihil sit stabile, firmum & solidum. Quot grandia palatia, viridaria omni deliciarum genere exstructa videmus, quorum auctores nescimus, & uti de possessione in possessiones diversissimas abeunt, ita quoque paulatim oblivione obliuerantur omnia, ut ne quidem centum anni transcant, quin in alias & alias familias transplantatae, villae, palatia, cujusnam primo fuerint, memoriam perdant.¹³⁵

Ultimately, the works of man will decompose. For the entire world is ephemeral matter and the objects of civility were ultimately composed of its matter. John Donne explains:

Aske where that iron is that is ground off a knife, or axe; Aske that marble that is worn off of the threshold in the church porch by continuall treading, and with that iron, and with that marble, thou mayest find thy fathers skinne, and body; *Contrita sunt*, The Knife, the marble, the skinne, the body are ground away, trod away, they are destroyed, who knows the revolutions of dust?¹³⁶

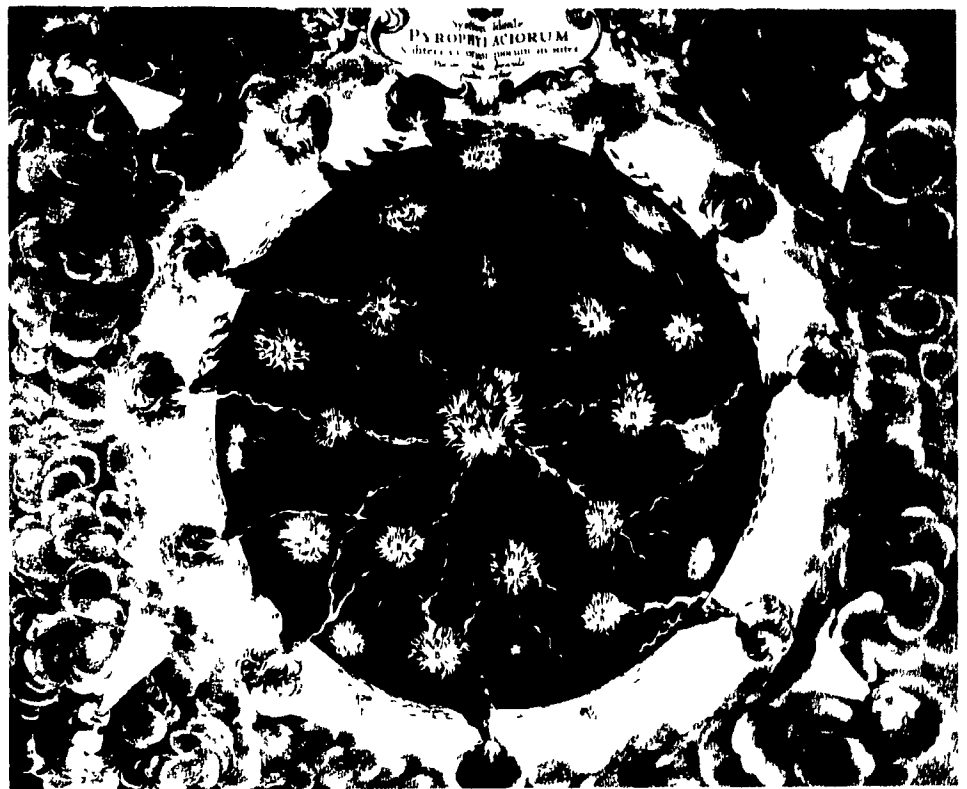
For Kircher, time destroys, and for that reason it is adversarial to the human constructs of space. Yet purified space, in the form of a geometric supposition, is elusive of time and thus remains intact.¹³⁷ The *Hidden*, resident of the intellect and agency of the imagination, is the only thing immune to deterioration. Unseen, it is the purest form of a geometric construct: the monad.

Kircher assumed that the world was in a progressive state of ruination from the original purity of the Golden Age.¹³⁸ Virtually everything that encompassed civilization and the world, such as political power, language, geography, nationality and time itself, was subject to a consistent decline from the time of the origin.¹³⁹

Such a theory is made even more explicit by Kircher's naturalist contemporary, and influence in this matter, Thomas Burnett. For Burnett, the destinies of human endeavors and the world are shared.¹⁴⁰ Not only humankind, but the earth itself, had de-evolved from a golden age of its own. Terrestrial history starts as a perfected form and ends gradually, but inevitably, in its total consumption. Burnett's history begins with the liquid world of the deluge. Both water, dust and air congeal the inundated world into a featureless sphere, as perfect as a pearl. From this it was a temporal corrosion that formed the world - its rivers, mountains, plains and oceans - into the topography that we now recognize.¹⁴¹ Earth, then, is likened to an archaeological find. Everything that topographically informed a culture of its myth, its landscape and even its national identity, was equated with the ruin of the paradigmatic. Mountains and rivers, grottos, etc. were no longer *natural* features, they were erosions and upheavals of the pure plain of the Golden Age.¹⁴² The cultural ruin, and the ground it sits on, are both part of the same picture. Earth resounds with the redemptive theme of paradise spoilt/lost (a theme that will later be elaborated in the romantic movement). Thus even the once eternal privilege of world is undermined and read as relative only to a *human* history. By the same token, humanity itself is no longer central to world history, for the stage of the human legacy is now shared by the chronology of natural history. It enters the same mechanistic model of humanity: a body in itself, but a body aging, and eventually dying, just like our own.

The planet is a geo-cosmic organism whose mortality is determined by time. It has skin and organs -the crust and the underworld- as well as motor functions such as the planets and the surrounding cosmos. The history of the world is in itself the tragic drama of a personage. It metamorphoses like all biological matter, it begins in an original state, it transform with age, even attempting to heal the wounds that time had inflicted, it finishes in death. Thus even the world is not eternal. As long as we occupy it, its destiny is incomplete, forever in flux and in the state of becoming by grace of the *Virtus Lapidisca*, the intelligent force controlling all states of matter.

Mundus Subterraneus
Kircher *Mundus
Subterraneus*



Where previously the paradigmatic order had been read as a temporal origin, in the Baroque it was of particular importance to read it in the state of its contemporary projection. Hence, as well as speculating on the appearance of the Tower of Babel, the evidence of its deterioration was of equal importance. Even though the credibility of other descriptions were somewhat suspect, Kircher took great pains to relay the propagandist accounts of fellow Jesuits and explorers who had claimed witness to the site. Most described the ruins by their presence of apocalyptic evil. John Mandeville noted its gigantic scale of ten miles long, and stressed the profundity of vermin and serpents in the ruins.¹⁴³ Leonhart

Rauwolf mentioned that one could not even approach the site for fear of disease and danger. Others claimed that the site was nothing more than a cavity filled with water from the Euphrates.¹⁴⁴ Even more dramatic testaments to the ungodly scale claimed that the remaining ruin was so tall that the groves of Jericho looked like a swarm of locusts, and that the thin air robbed all men of their wits.¹⁴⁵

Little distinguished a rigorous archaeological survey from the exegetic text. Archaeology, rather, was necessitated by a consummate obsession with legitimizing the value and truth of the text. Theory led to the assumption that all divergence between text and reality had to be reconciled with the text as the ultimate reference. The text was crucial to the Baroque intellectual, for it was the only thing that may possibly have had any permanence in a decaying world. History could be resolved only by evidence, whether through its traces within the documental site or the physical monuments of an abandoned heritage. The Baroque explored books and artifacts like the Renaissance explored the universe. Books were the true monuments, more immune to the weathering of time than even the pyramids.¹⁴⁶

The earliest histories we have all seem to come from the ancient limits of cities: their walls. The archaeological city is literally a book of sequential stone walls. No matter how sophisticated the culture that we examine, the first transcriptions of history always begin on the substance of the city itself. As a culture evolves, the walls of the city express themselves in pages, until they themselves become the limits of the culture.

- 1 Consideration of the logistics of the allied forces in the recent gulf war attest to this
- 2 Dante, Alighieri *The divine Comedy*, Part I, (Hell) Canto XXXII
- 3 Levinas, Emmanuel *Totality and Infinity*, p 222
- 4 Ibid , p 223
- 5 Ibid , p 225
- 6 Our media carefully distinguishes between the Anarchic warrior (Saddam Hussein),
and the intellectual warrior / poet (General Norman Swartzcoff), who has a wistful
(weak)ness for classical situations
- 7 Machiavelli, Nicolo *The Prince*
- 8 Machiavelli, Niccolo "The Discourses" from *The Prince and The Discourse*, p 296
- 9 Ibid , p 297
- 10 Ibid , p 298
- 11 Ibid , p 359
- 12 St Augustine *City of God*, Book XVIII, Chapter 3 pps 764 - 765
- 13 Benjamin Walter *The Origin of German Tragic Drama*, p 62
- 14 Ibid
- 15 Ibid
- 16 Ibid , p 85
- 17 Ibid , p 93
- 18 Ibid
- 19 Vico, Giambattista *The New Science*, Introduction p XX
- 20 Rossi, Paolo *The Dark Abyss of Time*, p 248
- 21 Ibid
- 22 Kircher *Turris Babel*, p 6 "You are aware of what an unhappy state the world was in
before the flood Together with me, you saw the brutality of the giants before the
Flood, and the unspeakable perversity of men in every kind of wickedness and
misdeed, which , overstepping the limits of nature, attained to this impiety from the
sacrilege of the line of Seth in conjunction with that of Cain "
- 23 Ibid p 7 In describing the ordeal of the construction of the Ark, Noah explains, " I
sweated for a hundred years on the building of the ark, what insults and harrassment I
put up with from the rascally giants "
- 24 Gressman, Hugo *The Tower of Babel*, p 14
- 25 Ibid
- 26 Frontesi - Ducroux *Dedale*, p 98
- 27 Ibid , p 139
- 28 Kircher *Turris Babel*, p 7
- 29 Ibid , p 64
- 30 Ibid ,
- 31 Ibid ,
- 32 *Book of revelations*, 17 5
- 33 Ellul, Jaques *The meaning of the City*, p 52, (in quoting the book of revelations
(17&18))
- 34 St Augustine *De Civitas Dei*
- 35 Davis, Charles T " Rome and Babylon in Dante" in *Rome in the Renaissance The
City and the Myth*, p 19
- 36 Ibid , St Paul
- 37 Weiner, Sarah Elliston *The Tower of Babel in Netherlandish Painting* p 102
- 38 Kircher *Turris Babel*, (dedicatoria) II
- 39 Ibid
- 40 Ibid , p 13
- 41 Ibid , p 26
- 42 Ibid , (Dedicatoria) III

- 43 Ibid , (Dedicatoria) III
- 44 Ibid , p 28
- 45 Ibid , p 40 "He apprised them of his complete plan, he instructed them most diligently in the execution of all those things which pertained to the aforementioned construction, prescribed the measurements of the entire fabric, and showed them a model or prototype made of wood or clay for them to follow, inasmuch as it is likely that he, as he exercised power with the highest judgement, had drafted out this work of so great size, conceived many years before, not thoughtlessly and with a certain haphazard resolution but with mature and quite deliberate spirit "
- 46 Ibid , p 40
- 47 Ibid , p 30
- 48 Ibid , p 31 "a city which would be the model and chief of other cities which would be built afterwards in other regions "
- 49 Ibid , p 30 "let us delve, and lay out the foundations according to the prototype already conceived by me, expounding the proportions of the work to be built in each of its parts "
- 50 Fishbane, Michael *Text and Texture*, p 36
- 51 Kircher *Turris Babel* p 21 "So it is fitting that those who dwell in Shinar built their city from bricks, for those who devote themselves to the pleasures of the flesh erect from frail matter a changed mind. But those who renounce the sinful delights of the carnal life through the work of holiness build up within themselves the sanctification of the virtues. These in truth change bricks into stones, who can say with Isaiah, "The broke the bricks but we built with dressed stones." Breaking the bricks, he builds indeed with dressed stones who chastises the lascivious desire of the flesh with the rigor of strict discipline, who overcomes the law of his members with the law of the mind, who rouses the fortitude of the body to the manly strength of the spirit, as if changing bricks into the stones with which the walls of Jerusalem are built "
- 52 Cassuto *A commentary on Genesis*, p 241
- 53 Walton, John H. *The Tower of Babel*, p 28
- 54 Cassuto *A Commentary on Genesis*, p 241
- 55 Frazer, J.G. *Folklore in the Old Testament* pps 367 - 370
- 56 Walton, John H. p 46 (citing *The Esarhaddon Prism V* 14-16)
- 57 Ginzberg, Louis. *The Legends of the Jews* Note 88 Yashai Noah
- 58 We read the following inscription from the bricks of Nabuchodonodor
Nabuchodonodor, King of Babylon son of Nabopolassar, King of Babylon I am! The gate of Ishtar I built with blue enamelled bricks for Marduk my lord. The vigorous copper bulls, strong serpents I will place in the roof of the doors.
Alongside of
I Saddam Hussein president of the Republic of Irak I have reconstructed Babylon and rebuilt the walls of bricks of the palace of Nabuchodonosor and the temples of Ishtar, of Nabu and of Nineveh, during the years 1988-1989, to bring to the Iraqi people the grandeur of their glorious past
Kyrrou, Ariel, "Saddam Hussein se prend pour Nabuchodonosor" *Actuel* No 135, Sept 1990, Societe du Journal Actuel S.A., Paris p 95
- 59 Parrot, A. *Ziggurats et Tour de Babel*, p 38
- 60 Gressman, Hugo. *The Tower of Babel*, pps 33 - 34 See also, Walton, John H. *The Tower of Babel* p 79
- 61 Josephus, Flavius. *The Works of Josephus Complete and Unabridged, New Updated Version* p 29
- 62 Frazer, *Folklore in the Old Testament*, p 367 (from the inscription of E)
- 63 Ibid
- 64 Franckfort, Henri. *The Kingship of the Gods*
- 65 Walton John H. p 28
- 66 Frazer *Folklore in the Old Testament*, p 364
- 67 Kircher *Turris Babel* (dedicatoria) III - IV "They appeared like new Caligulas resurrected from hell, who, the more abundantly to gratify his cruel thirst, wished that the Roman people might have but one neck so that the head of the world, lopped off by a single blow, but lie low upon the earth. Thus did these henchmen of fury, more

- repulsive by far, shake their deadly weapons of treachery and envy, weapons dipped in every pus of crime and venom and tipped with the frenzy of delirium, against your sacred head -- the head, that is, of Christendom -- in a huge battle of the giants "
- 68 Kircher *Turris Babel*, (dedicatoria) III
- 69 Ibid , p 33
- 70 Cassuto p 242
- 71 Ibid , p 227
- 72 Battaille "The Obelisk" *Selected Writings*, p 215
- 73 Battaille "The Sacred Conspiracy" *Selected Writings*, p 180
- 74 Frazer *Folklore in the old Testament*, p 368 (These are the words of Nabopolassar on the cylinders of the construction project planted in the lower four corners of the temple)
- 75 Cassuto *A Commentary on Genesis*, p 242
- 76 Walton, John H *The Tower of Babel*, p 82
- 77 Frontisi - Ducroux Francoise, *Dédale mythologie de l'artisan en grece ancienne*, p 95
- 78 Irwin W A , *The Hebrews*, p 275 (This is quoted from the blood of Jeremiah chapter 18)
- 79 Ibid , p 236
- 80 Ibid , p 244
- 81 Ibid , p 236
- 82 Ibid , p 258
- 83 Ibid , p 223
- 84 Allen, Douglas Cameron p 128
- 85 Kircher *Turris Babel*, (dedicatoria) II "Here do I introduce upon the stage that unhappy and ill-omened example of stubborn arrogance, and would that I might present it before the eyes of all that they might see how, in this theatre of ambition, the play always ends in a tragic catastrophe, and that they may perceive that no other epilogue is to be expected to the work which impiety creates than a heap and mound which will bury the man who devises such nefarious monstrosities in the very same ruin "
- 86 Benjamin, Walter *The Origin of German Tragic Drama*, p 70
- 87 Ibid , p 69
- 88 Ibid
- 89 Ibid , p 65
- 90 Ibid , p 17 Introduction by George Steiner
- 91 Ibid
- 92 Ibid , p 106
- 93 Ibid , p 73
- 94 Ibid , p 98
- 95 Ibid , p 106
- 96 Ibid , p 119
- 97 Ginzberg, Louis *The legends of the Jews* note 77 from Yashar Noah 17b 18a
- 98 Ibid , Pesachim 94 13 p 77
- 99 Ibid , p 177
- 100 To name, but a few, Nimrod appears and performs centrally in political commentaries such as , *Ioannis Calvini, Opera quae supersunt omnia* by John Calvin, *La seconde Semaine* by Salluste Sieur Du Bartas, *Kritische Gesamtausgabe* by Martin Luther, *The Fall of Princes* by John Lydgate and *The Apologie of Prince William of Orange Against the Proclamation of the King of Spain* by William of Orange, etc. Ironically, mention of Nimrod is explicitly avoided among the vast collection of tyrants and despots used as precedents in the writings of Macchiavelli
- 101 Weiner, Sarah Alliston p 159
- 102 Ibid , p 166
- 103 Gressman, Hugo *The Tower of Babel* p 26

- 104 Graves, Robert & Patai, Raphael *Hebrew Myths*, p 127
- 105 Gunzberg, Louis *The legends of the Jews* p 83 (Clementine of Alexandria Recognitiones)
- 106 Ibid, Clementine of Alexandria Homilies
- 107 Graves, Robert & Patai, Raphael *Hebrew Myths*, p 127
- 108 Ibid, p 128
- 109 Gunzberg, Louis *The legends of the Jews* note79 (From Hadar a Da'at, Gen 25 32)
- 110 Ibid, note78 (From Yashar Noah, 17a and Pesahim 44b)
- 111 Ibid, note77 (From Midrash Aggada gen 10 8)
- 112 Graves, Robert, & Patai, Raphael *Hebrew Myths*, p 126
- 113 Gunzberg, Louis *The legends of the Jews*, note79 (From Hadar a Da'at, Gen 27 15)
- 114 Ibid, note77 (From Yashar Noah 17b - 18a)
- 115 Machiavelli, Niccolo *The Prince* pps 88 - 89
- 116 Salluste, Guillaume de *The Divine weeks*, p 423 lines 71 - 72
- 117 Ibid, p 442 lines 25 - 30
- 118 Ibid, p 442 lines 40 - 45
- 119 Kircher, *Turris Babel* p 116
- 120 Ibid, p 28
- 121 Ibid, p 28 Trans famous giant
- 122 Ibid, p 28
- 123 Liddle and Scott's Greek - English Lexicon
- 124 Kircher *Turris Babel*, p 30
- 125 Salluste, Guillaume de *The Divine weeks and Works of Guillaume de Saluste Sieur du Bartas*, p 442 lines 14 - 18
- 126 O 1 *Book of Daniel*, 2 31 34
- 127 Kircher *Turris Babel*, p 22
- 128 Weiner, Sarah Elliston *The Tower of Babel in Netherlandish Painting*, p 143
- 129 Fishbane, Michael *Text and Texture Close Readings of Selected Biblical Texts*, p 36
- 130 Kircher *Turris Babel*, p 21
- 131 Ibid
- 132 Ibid, p 22
- 133 Ibid
- 134 Ibid, p 23 "At present one can see in Rome the mindless heaps of the buildings erected by the men of old, which if you make inquiry, you will not find, and if you find, you will see nothing but half-buried corpses. These men thought to pile up for extrusions which would last forever. In fact, barely 1600 years have passed, and not a trace of them remains."
- 135 Ibid, p 23 "They piled up towers whose summits touched the heavens, but whether impeded by confusion of mind or forestalled by death, or agitated by the tumults of war, they could not finish what they set out to do. For the evil fate of mortal men turns the wheel of change, so that nothing is stable, firm and solid. So many huge palaces and gardens, piled high with every kind of delight, have we seen, whose creators we do not know. And just as they go from ownership to different ownership, so also, little by little, everything is obliterated in oblivion, so that not a hundred years goes by but that the villas and palaces have lost the memory of him to whom they had originally belonged."
- 136 Warnke, Frank J *Versions of the Baroque, European Literature in the Seventeenth Century*, p 209
- 137 Bowman *The Difference Between Greek Thought and Hebraic*, p 128
- 138 Bacon, Francis *The new Atlantis* passim I use Bacon's theory and his influence as a point or demarkation in which history is thrust forward into a future objective of a progression towards a theoretical end to the history of man through the accumulation of knowledge
- 139 Rossi, Paolo *The Dark Abyss of Time*, p 200

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- 140 Ibid, op cit pps 33 - 113 Rossi uses Burnet extensively to trace the emergence of natural history as a discipline for the foundation of scientific theory
- 141 Ibid, p 37
- 142 Ibid, op cit pps 33 - 113
- 143 Weiner, Sarah Elliston *The Tower of Babel in Netherlandish Painting*, p 21
- 144 Ibid, p 17
- 145 Graves, Robert & Patai, Raphael *Hebrew Myths The Book of Genesis*, p 126
- 146 Benjamin p 140

Section III: Seminal Projections.

The Names of Adam's Postures.

Adam supplants Plato as the true father of philosophy, for

Adam's action of naming things is so far removed from play or caprice that it actually confirms the state of paradise as a state in which there is as yet no need to struggle with the communicative significance of words. Ideas are displayed, without intention, in the act of naming, and they have to be renewed in philosophical contemplation.¹

The Adamic tongue, according to Benjamin, is the language of truth—the aspired dialect of the philosopher—for it is the goal of the philosopher to articulate the world in the original mode of perception.² The failure, or perhaps the mandate, of the philosophical project is its inability to reveal the purity of ideas. For as their manifestation is obliged to be phenomenal, the truth, described by Benjamin as the *composition* of ideas, is ultimately invisible (intellectually and visually). More to the point, the truth is an *Ideal*—the death of intention—³ a power beyond the phenomenal circuit. It is only in the *Name* that we find the residues of truth. It may be assumed, consequently, that its specific inception at the time of the original world, unimpaired from intellectual meaning and primordial in its vision, will have presence in the names that we utter now.

Within the space of a day, Adam gives names to the entire lexicon of the *angelic tongue* from the entirety of his surroundings.⁴ By our own standards, it is a monumental and assuredly inconceivable task. Yet Kircher attributes the ability to name the animals, plants, minerals—and the arts, to his *impossible* memory and intelligence.

Adam is the first encyclopaedist—the original curator of the only ever complete *Wunderkammer*, an institution that by definition is condemned to the pursuit of an infinite catalogue (its hidden intention, being the mnemonic recuperation of the lost language). Many have speculated that the original articulation was not only the product of his nomenclative invention names, but in the power of speech that the animals themselves were said to have possessed. The most notable example, of course, is the speaking serpent from the very same biblical episode.⁵ If this is the case, however, then the shift in language after the fall is significant. For if the animals themselves had possessed the power of speech, then the exile of humanity is not only from paradise, but from species. YAWLH's introduction of prohibitive hierarchies distinguishing between Heaven and Earth, condemns man to be an animal of desire, whose temptations are forever bound to the transgression of the imposed limitations themselves. The



The origin of speech
Kircher *Musurgia
Universalis*

spoken boundaries draw the line between *Creator* and *Creature* and incarcerate Adam on the side of beasts⁶

One could find root for the vast vocabulary of humanity in its animalistic beginnings. On the basis of this assumption the theory of a shared origin, whether an enlightened or bestial beginning, speculated that the foundation of civilized humanity had to have begun in the form of a coexistence with the animal world. For Kircher, the Hebrew language (the *names* of the animal) is an onomatopoeic imitation of the animal call. As one of many examples, he explores the word *Arieh*, meaning Lion. In its Hebrew pronunciation, it imitates the sound of a lion's roar, the essence of the animal itself. But even further, Kircher explains that the image of the animal is transcribed onto the script itself, thereby forming the basis for the Hebrew characters. The manipulation of these embodied letters, such as in the cabala, generates the remainder of the Hebrew tongue. An entire family of words could ultimately find its way back to the basis of an onomatopoeic expression.⁷ It is from the gradual manipulation and re-arrangement of these fundamental components of the original tongue, consequently, that our own complex and vast linguistic tradition has evolved.⁸

If the original language was the result of a *naming*, then the first words would be absent of the verb, describing action only by way of the noun (*names*).⁹ Without the conventions of grammar, this primitive tongue would be limited to the description of human acts and concepts solely in terms of their bestial reference. Hence a *Lion - Man* would describe a bold individual. Or as Kircher describes the nature of Nimrod's character:

"nec non vulpino calliditatis astu plenus".¹⁰

Naming is the inevitable concession to imitation. As Socrates explains, if we did not have the capacity to speak and hear, we would be imitating the motions and forms of the natural world with our hands.¹¹ Where the artifice is the naming, and the artificer is the *Namer*, it is legitimate in its status as a mimetic art.¹²

Among the sciences and the arts tutored to Adam by the angels, the most perfect of them is language. Adam, then, is not only the discoverer of the

names for things, he is their first artificer. For the Hebrews, the making of a name is indeed an artifice, but one that is specifically limited to the domain of YAWEH. Those who do make names are transgressing the limits of mortality. Remember: the intention for building the Tower is *to make a name for themselves*. Thus the transgression of a mortal linguistic artifice is inherent not only in the *naming* of things, but in the making of the city, a transgression of the *diaspora*, as well as the *Toldot*.

Clearly for Plato the invention of words is a matter of artifice. Even if speech is a natural practice, and the names are the result of a natural intention, it still remains an artifice. A practice depends on instrumentality for its product. So, by analogy, the proper determination of the name is conducted by instruments designed to resolve its natural form of artistry.¹³ For as the weaver uses the shuttle as a natural practice, the instrument of a name is, in itself, a name. The name is an instrument that imitates the natural order, and will be made out of whatever material (the cultural language) necessary to arrive at its natural form.¹⁴ Names are mimetic, and the legislator -the artisan of names- is charged with the task of approximating nature as closely as possible. But the one who ultimately decides on the name is the one who uses it: the dialectician.¹⁵

Even in the Baroque, the artifice of names -in the form of diplomatic propaganda- was the most effective instrument of religious power. In a report to pope Innocent XII, the directors of the seminary for foreign missions in Paris describe China as having moral, ritualistic, and ecumenical traditions comparable to, and worthy of alliance with, the Christian empire. Yet their recorded history began long before the scripture of the Old Testament -a blasphemous, if not destructive, contradiction to the authority of the scriptures.¹⁶ That which could resolve the ambiguity of China's position within the Christian framework of humanity, consequently, would simply involve the practice of propaganda.

All that is needed is to give the names of Heaven & of Sovereign Emperor the primeval sense that the ancient Chinese gave to them, and they will signify the true God.¹⁷

Just the simple exchange of names was sufficient to transform a pagan culture into a legitimate member of the Christian empire.

It may be speculated that the insurance of a family line is equivalent to the safeguarding of a name. The challenging pursuit of genealogical lines from the Baroque to the first progenitors is conducted through the decayed labyrinth of *proper* names. In the Hebraic tradition this obsession materializes in the form of the *Toldot*, a biblical accounting of the sacred names of the nation, in generational sequence. The names are indeed sacred. But most importantly, they are the exclusive property and invention of YAWH. They originate from the secret lexicon of Eden, and their combinations as they appear in the sacred text are the machinations of an inspired destiny. The introduction of the lineage of the family of Abraham is accompanied by YAWH's alteration of their names: *Abram* to *Abraham* and *Sarat* to *Sarah*.¹⁸ This relatively insignificant gesture only underscores the fact that names are the privilege of YAWH, and it is only by the agency of *his* names that the generations persevere.

**I shall make you into a great nation; I shall bless you and make your name so great
that it will be used in blessings
Those who bless you, I shall bless,
those who curse you, I shall curse
All the peoples on earth
will wish to be blessed as you are blessed**¹⁹

Lest is the provisional declaration of revolt in the text of the Tower episode.

Lest we be dispersed over the face of the earth

The project is a barricade against the imposed name and its accompanying dispersion. The making of the name *for themselves* is an assumption of responsibility for their own destiny. In the Epic of Gilgamesh, naming is the instrument of struggle against the inevitable mortality of man.²⁰ The king makes his name permanent by stamping it into every, every brick of the city.²¹ But beyond the human weakness for desired immortality, the king, in his passage of names, claims membership to a breed outside of the mortal world.

For on the same principle (the naming of the foal of a horse a horse) the son of a king is to be called a king. And whether the syllables of the name are the same or not the same makes no difference, provided the meaning is retained; nor does the addition or subtraction of a letter make any difference so long as the essence of the thing remains in possession of the name and appears in it.²²

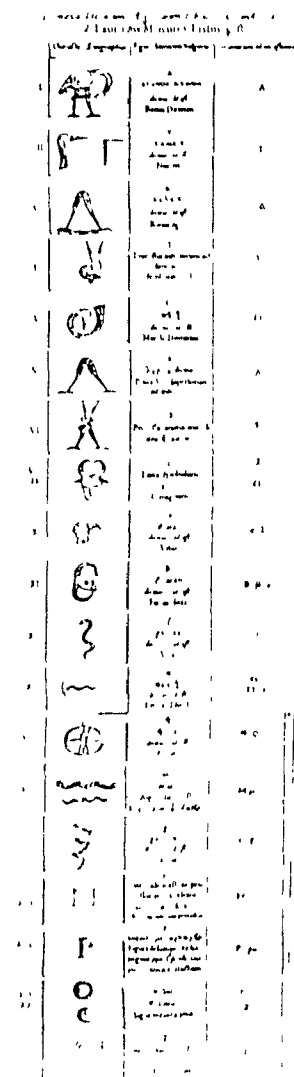
The king claims himself as beyond men. For he is the only one to reproduce in a manner that does not change him. His transference of name among generations as if it was of a breed still links him to the nondescript hierarchy of the paradise.

The Hebraic tongue is the closest thing that we have to the words of God, the remnants of which are found in the enduring names of the *Toldot*.

And (to conclude) when I conceive, how then
They gave not idle, casual, names to men,
But such as rich in sense, before th'event,
Mark'd in their lives some special accident;
And, yet we see that all those words of old
Of Hebrew still the sound and sense do hold
For Adam (meaneth) made of clay: his wife
Eva, translated, significth life
Cain, first begot Abell, as valne and Seth,
Put in his place.²³

But it is in the letters of the script that the mysteries of the Adamic tongue are especially latent. Beauty is derived from the proportion and symmetry of the original man. By extension, each letter of the Adamic script follows the same standard of perfection.²⁴ The word is composed of organs and humors that, in their arrangement, form the totality of a body, something to be *named*.²⁵ With Kircher, virtually everything in the *namable* world is assumed to be a sum total composition of the ultimate representational organ, the *Monad*. The body, architecture, and especially for our purposes here, language, are the product of a mystical and divinely inspired arrangement of these fundamental organs. The hypothesis of a divine code implied that, underlying its immediate appearance, the *name* was latent with secondary opportunities of meaning. Each letter, a snapshot of the diverse postures of Adam's body, has its own hidden intention and meaning. But it is in the combination of letters that these are most clearly expressed, the paradigm being the original composition of names arranged by Adam. Thus, in Kircher's view, the key to language is to be found in the Cabala, the science of totally representational parts with *assumed* significance, moderated in their appearance of meaning through a rigorous *ars combinatoria*.

Projected from a hidden but illuminating source, letters appear as silhouettes on the surface of the page, ghosts of an assumed higher order.²⁶ Thus what seems like a tangential digression from the subject of his treatise,



The transformation of the original letter forms
Kircher, *Turris Babel* p. 158

Arquitectura Recta et Obliqua, Caramuel della Lobkowitz takes great labour in explaining the cabalistic transformations as a geometric projection of the same order that engenders the appearance of architecture, and for that matter, the world.²⁷ In effect the monad, the only viable embodiment, substitutes the entire catalogue of the empirical world with representational phantoms. In this respect, the implications of writing are broadened. One not only composes for the sake of the poetic sequence, at its most constituent level, the composition will be seen to employ the eternal lexicon of the allegorical image.²⁸ This seemingly infinite tableau of allegorical figures provides philosophical speculation with a host of open possibilities. When the Baroque divested empiricism from its explicit commitment to embodiment, it exiled the symbolic from the tactile field. It was the idea that the entirety of the world could be coincident with its most minute fragment that left the monad as the only true *manifest* symbol.

It is because of this discovery that language could thus no longer be regarded as classically symbolic, for its phonetic, structural, and syntactical codes were not entirely consistent with the artifice of the plastic symbol. In fact, the artifice of language was seen as totally representational, intentionally removed from, and independent of, the phenomenal world. Moreover, as allegorical entities, letters were free from the bonds of the word, secreting intention in their solitary state as fragmented characters. The subsequent configuration of letters into syllables, words, sentences, paragraphs, and texts resulted specifically from this allegorical mode.²⁹

In the evolutionary theory of the Baroque linguist, letterforms were determined by trial and error. The first were mnemonic devices that induced oration, rather than specific phonetic codes.³⁰ Allegory spoke of actions and things, and it was not until characters were combined in a compositional artifice that their meanings slowly contracted into simile, and then into metaphor.³¹ Accordingly, Vico speculated that the first language of heraldic and heroic emblems was indeed mnemonic devices, and by his own account, the poetic tongue was nascent in their composition. The implication was that the equipment of language is allegorical, but its symbolic aspiration was for a poetic practice.³²

If naming implies the alienation of the subjective code to a role peripheral to the object, then the name's exile could only be managed by a culturally engineered linguistic order. To the extent that the mutual isolation of signified from signifier is, by definition, impossible, the complexity of their

linkage results in the necessary preconditions for language. The apparent gulf between the object and its name doesn't necessarily demote allegorical text to a state of less than being. Instead, time is extracted as the code between allegories and out of this temporal concordance language is invented. As we know, dialectic is completely invested in time, depending on the orchestration of language to a succession of moments. With the Baroque assumption that the world was seen as a pansophic collection of allegorical images, whose diversity in scale ranged from the single character of text to the geophysical monument, language could potentially be formed by manipulating the temporal and spatial orders of the allegorical collection of the entire representational world.

There is, at this point, a distinction to be made between allegory and symbol. The traditional interpretation of the symbolic order resides in the appearance of an essence resulting from the fusion between the material world and the transcendental world. Usually this is celebrated by the distinction of its momentary revelation. When a culture bears witness to the *inexplicable* expressing itself in an earthly form—as would a plastic symbol through sculpture—the immediate specificity of the form is culturally institutionalized. Where the symbol is the unquestionable embodiment of an essential idea, the allegory speaks through a form other than itself.³³ Totality is instantaneous in the symbolic, yet allegory is expressed by a progression of moments, acquiring an inter-cohesion through the fluidity of time. In that it operates exclusively within the category of time, it may easily be regarded as a form of history manifest.³⁴

What emerges, here, consequently, is an historical dialectic mediated by allegory, but ironically centering on an even more idealized symbol of nascent fixity: the specific placement of the paradigmatic origin within chronological time. The Baroque crisis was specifically precipitated by the disturbing realization that the empirical world (the symbolic), and the origin of that world, did not necessarily correspond. Yet allegory was hardly a rejection of the symbolic. In the context of a growing insecurity over the implications of a *precise* historical discourse, it posited what was understood to be the only embodied truth—the monad—onto the safer, less questionable ground of distilled theory, rather than demanding its outright (and impossible) rejection.³⁵

Allegory is the exemplar vision of the Baroque imagination.³⁶ Its freely referential correspondence was seen as a possibility to transcend the barriers of power, science, and even language.³⁷ By representing antiquity in allegorical figures, the dangers of paganism were slipped out of sight, and into the volumes

of materialized encyclopedias. The often contradictory, and thus destructive pantheon was put into corrected perspective and revised through propaganda, made possible only by the rule of allegory. Menaces were disarmed by incorporating them into the realm of church. The identification, and more so acquisition, of everything allegorical will have been the obvious precursor to the modern institutions of pluralism and homogeneous egalitarianism.

If the world's population arrived at Shinar *of one speech*, there will have been a significant chronological spread of approximately 3000 years in which the original tongue was of common usage. By Kircher's determination, the language of this span was exclusively Adamic, and remained so until the dispersion.³⁸ Speculations on the nature of this original tongue, relative to the contemporary language, were the essential components of any Baroque linguistic debate.

Homogeneity was speculated to have been the grammar of antiquity.³⁹ Thus the builders were said to have arrived with but one plan⁴⁰ - a providential solidarity, or more likely, an absence of difference. Everything was spoken in the same voice, the same tense, and thus the same actuality. Regardless of the orator and the listener, dialectic was absent, the words of the sage and the fool were precisely the same.⁴¹ The implication, unlike our own condemnation to dialectic and difference, was of a state beyond language, and of singular interpretation.

Pure language was the panacea to worldly incarceration. But the linguistic torments of humanity following Babel would be only an interim, for the return to the pure language was assumed to be forthcoming at the apocalypse. The Tower initiated a discordant course, the resolution of which could only be anticipated in the miracle of the Pentecost - the moment when linguistic (and by some accounts, geographical)⁴² confusion is rectified by the gift of tongues.⁴³ Indeed, the Pentecost was often explicitly linked as the reciprocal twin of the tower illustrated texts, such as the Bedford, and The Farnese hours, placed the Tower of Babel and the Pentecostal mountain on opposing pages.⁴⁴ This Biblical destiny was in fact the fulfillment of Kircher's (among others) dream: the emancipation of the world with one language, and thus one nation.⁴⁵

But while it may seem like a cyclical return to the singular condition of the post diluvium world, the Pentecost is, in fact, a paradigmatic exaggeration of the confusion of tongues. Both free from the constraints of time and its

regulation, Babel and the Pentecost appear to converge in the essential state of languageless homogeneity. But where the culture of Babel is defined by a mono-linguistic discourse, the Pentecostal state is hyper-linguistic. The oration is *spoken in* (an infinity of) *tongues*. Its intention is the voicing of a specifically misunderstood language. Obstruction of all cognitive understanding compels the listener to paraphrase from a free association of phonetic images. The voicing of a divine gibberish induces a liberating interpretation- a state of meditative ecstasy, consistent with the aims of the spiritual exercises of St. Ignatius. Indeed Kircher aspired that the world would reach this utopian dialectic, for its phonetic imagery, the kind of which we see in his *Musica Universalis*, was empowered with the pure force of the allegorical imagination.

The paradox, however, is that the investigation of language is engendered by, and limited to, the interim between these symmetric episodes. The prophesy is in fact hidden in the lines of the Tower of Babel poem itself. The text opens with "*All the Earth*" and closes, as we know, with "*a scattering*". The pivotal word -*scattering*- frames the episode, initially with the fear of a prescribed destiny, and in the end, with its realization.⁴⁶ For the Baroque scholar, the field of investigation was confined to this destiny. Virtually nowhere was without language,⁴⁷ and virtually every language, other than the chosen Hebrew, was to have derived from the familial tongues selected by YAWH following the destruction.⁴⁸

As humankind journeys by familial dispersal, language is assumed to succumb alongside of it. Thus Kircher, in observing the distinction between African and European tongues, cites the divergent *bloodlines* of Chem and Japhet as being at the root of this linguistic difference.⁴⁹ As Josephus observes, families, by fault of their disintegrating *names*, are destined to disseminate.⁵⁰

All the languages of the world were inevitably linked to the original tongue, and by right of its sacred character, the possibility of including heretic cultures among the legitimate legions of the Christian was thereby opened. Cultures that were respected, but considered illegitimate, were absorbed into the human family under the genealogical tracing of Christian propaganda. As a result, important, but pagan, sources were granted their due credibility among the sacred texts. Of all the cultures that were spread about the world, Kircher considered the Greeks, aside from the Hebrews, to have retained the most from

the original tongue, for they were able, at least in a mutated form, to establish reasonably comprehensible governments and institutions.⁵¹

Led by this observation, Kircher devoted a large part of his scholarship to investigating the Coptic script, the linguistic junction between the Greek alphabet and the Egyptian hieroglyph.⁵² Fabri de Peiresc, responsible for the course of research that a young Kircher was to undertake, found the Coptic text to be the hidden key bridging the hieroglyphic past with the languages of the Christian project. The Copts, a devout Christian sect founded in Egypt, penned a hybrid script whose origins were implied in both languages. In Kircher's eyes, these interim monks were priestly practitioners of both the Christian faith (the Greek text), and ancient mysticism (the hieroglyph). The divine truth of the golden age was immanent in all religions, with Christianity superseding, but it was first revealed to humanity by the wisdom of the Egyptians, and thus imbedded in the hieroglyph.⁵³ So popular was this perception that the authority of the Egyptian mystical teachings of Hermes Trismagistus (still believed at that time to be an authentic Egyptian scholar) threatened to surpass even those of Moses.⁵⁴ The hieroglyph was thus a profound concern of linguistic scholars, for not only was it an enigmatic subject for speculation, but in addition, it possessed, alongside the cabala, the potential for the unfolding of a multitude of meanings from a single character.⁵⁵

Like the decayed bones in a Churchyard, the original Adamic postures were to be reconstructed as archaeological fragments. Language was an object on a course towards disintegration—forever in a state transformation. Kircher's objective was to map the itinerary of this metamorphosis. Thus he demonstrates, with Jesuit rigor, how the degenerate Roman (as opposed to the pure Hebraic) alphabet transformed by losing limbs and acquiring redundancies in the malpractice of the human city. Archaeology at this point was subservient to propaganda so that anything, in the interest of the church, could be traced back to an idealized origin. Speculation worked freely within the parameters of differing linguistic states. Like a building in ruins, whose original idea and destiny is clouded by its present form, each linguistic code was an imperfect example for the next, or of that prior. All languages between the paradigmatic antipodes were essentially mutations, incomplete shades of an original meaning.

quae non suas patiaturs corruptelas, sive id fiat ex vicinarum regionum, populorumque confortio, sive ex ingenio particularium provinciarum, & natura loci, sive ex novarum vocum inventine.⁵⁶

There are several reasons that Kircher gives for the corruption of language, all of which are a direct consequence of, and to, the *City of Man*. The original confrontation persevered even after Babel, in both subtle and explicit forms. From the calamitous revenge on the city foundations, to corruption by change in pronunciation, the vain efforts of Babel were consistently put to ruin by the inevitable destiny of nature.

Divergent territories corrode the unity of language. The topographic segregation of nations not only isolates in terms of space, but as well in terms of time. Colonization, as an attempt to immortalize empire, subverts the temporal continuity of language by creating discrepancies between respective rates of linguistic change. At its most extreme, the destruction of an empire engenders entirely new languages by severing colonial from parental tongues. And yet, as Kircher describes of the differing quarters of Rome, even the most proximate of cultures succumb to the natural tendency of differentiation, by eventually forming their own distinct dialects.⁵⁷ (Lineage deteriorates territorial identity, and affiliation takes its place. Our bodies and our mouths tend to react firstly to the distinction of where they are, and secondly to the spatial and temporal reference of the other. Words mutate in their response to circumstance. Gradually the elements of original names are manipulated and arranged into newer and eventually, alien names.)

Even the text, by far the most resilient construct to time, ultimately succumbs to its corrosive. Our scripts are continuously diverging away from their original composition. Simple recovery is not an easy task, for in our ignorance of their original form we are limited to speculation. Yet the more we recompose the *names* from our speculations, the more irretrievable it becomes. Even the material substance of the text reinforces the paradox. The older text is destined to physically deteriorate, yet ironically its combination of the allegorical letters is closer to the origin, and thus more valuable. By the same token, the more recent the text, the more deteriorated the state of its allegorical composition.⁵⁸ For Kircher, the resilience to this inevitable deterioration lies in the rigorous hands of the scribe. Thus he condemns *Ezra*, who, when the Jews returned to Jerusalem from Babylon, was careless in his transcription of the book of laws, and as a consequence was responsible for a subtle yet important mutation of the

original language.⁵⁹ Again in the *Trauerspiel*, it is the intriguer/scribe who is the master of language, for it is through his conduit alone that the king will understand the language of mortals. And yet it is precisely along this conduit that the King's tongue, pure in its naturalism, will degenerate from its original sense, sound, and meaning. Thwarted, as in the best laid plans of history, by the court intriguer.⁶⁰

The court, it should be remembered, is (supposedly) to be autonomous from the time and space of the *City of Man*. Thus for the corridors of power, linguistic corruption is more than an adversary, it is an outright contradiction of their status. Among the measures for securing the temporal autonomy of church and court - such as, war, diplomacy, genealogy, propaganda, etc - the preservation of Latin stood as an eternal project of irrefutable priority. Language, in its distinction from the city, was the exclusive propriety of the courts, whereas dialect, as Kircher carefully distinguished, was the language of everyone outside of these institutions.⁶¹ In the evolving linguistic context of the Baroque, the critical interdependence between language and security was a subject of urgent consequence to Kircher. As monarchic and ecclesiastical rule were increasingly drawn towards a regional politic, dialects such as English, German, French and Italian began substituting Latin as the languages of power. Kircher was alarmed by this impending erosion, for not only did it imply greater misunderstanding between states, it struck at the foundation of court sovereignty - and this was, after all, an invitation to chaos.

It was only with the introduction of a discourse concerning statehood as a positive evolution from barbarism that the inquiry into language and nationhood became a debate of significance.⁶² Every nation had a vested self interest in promoting their own origins as being paradigmatic.⁶³ Language, as far as the search for origins was concerned, was national property. That the origin of the world was a subject open to debate, and that propaganda was now a legitimate political instrument, meant that nations could posit their languages as the original tongue, and that the global dispersion, in fact, was a degeneration of their own Golden Age. Every nation, then, adopted the Tower of Babel as their personal adversary. For as propaganda would permit, and genealogy would demand, an enemy state was a threat to the present by way of the origin.

Language is the last refuge from universal erosion. Civilization is dialectically condemned to the Augustinian cities: the one of stone and idolatry

(*City of Man*), and the one of language (*City of God*). Irrevocably incarcerated to the former, one can only *aspire* to the latter. Time is the adversary of this mortal aspiration. With this restraint, culture can do little more to stem it than by renouncing the grip of historical alienation. The text apprehends fleeting time and hoards it as if made available to the present. For Kircher, its monumental acquisition is manifest in the library -the closest, and most noble, surrogate for the *City of God*. Unlike the promise of Babel, where materialistic edifices are doomed to failure and enslavement, language is the only construct with the potential to unite humankind. In Kircher's view, the new universal city is built by virtue, sanctity, and the knowledge of languages, rather than stone and construction tools.⁶⁴ Any uninfected construct is found solely in the realm of the paradigmatic, and that realm is strictly limited to the pages of the scriptures. Hence Kircher's rigorous *construction* of *Turris Babel* and *Arche Noe*. In this mind set, the only circumstance that presents the architect as a noble figure is one in which he explicitly chooses *not* to build with stone, but with words.

The implication, thus, of Kircher's linguistic prejudice commits the entire world to the realm of the theoretical. With the substance of matter placed in doubt, artifice becomes a practice strictly limited to the imagination.⁶⁵ *Names* supplant bricks, and like architecture, are bound together through the poetic artifice of ornamentation.

And for each body acts, or suffers ought,
 Having made nownes, his verbs he also wrought:
 And then the more t'enrich his speech, he brings
 Small particles, which stand in lieu of strings
 The master members fitly to combine:
 (As two great boards, a little glew doth joine)
 And serve, as plumes, which ever dauncing light
 Decke the proud crests of helmets burnisht bright
 Fringes to mantles: eares, and rings to vessels
 To marble statues; bases, feet, and tressels.⁶⁶

Words are the original material artifice. As neither text nor speech, their articulation is their actuality.

...arcamque que ipso dictante Numine, pro sua infinita
 clementia construi jussit. ...⁶⁷

Full credit is due to the words of YAWH's command,⁶⁸ by responsibility to which the Ark was constructed, verbally. Like the popping of

the ears when emerging from water, the flood kindles human speech – a vague imitation of the tactile language, that until that point had been the privileged liaison of Noah alone

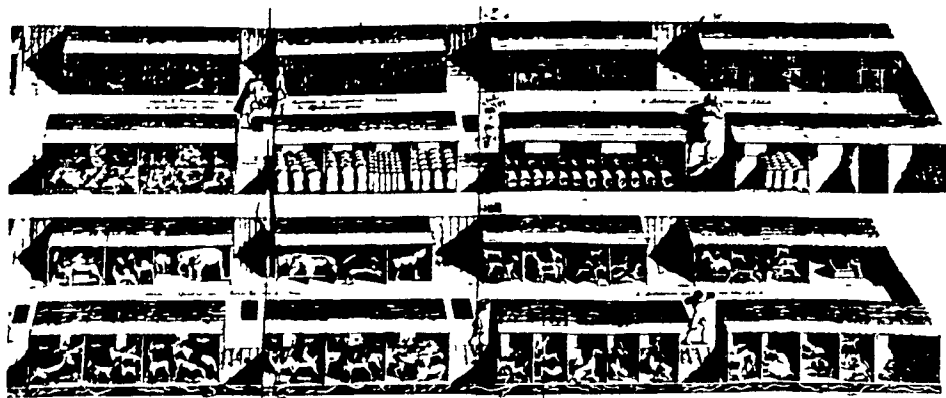
Attendite itaque sermones meos, auribus percipite verba salutis, quae si servaveritis 69

As if they had never existed before, Noah ordains the projection and reception of human speech. In a strange dialect, completely alien to our own, Noah exhorts without tense, without verb, and without writing. This is the first release of voices outside of YAWHHS, a break with the silent lexicon of the animals that had defined language up until that point. Without speech, humankind would never have dispersed from the determined and limited reservoir of names. But, ironically, without speech the lexicon would never have transformed into the unbearable clamor of profanity that would provoke YAWH into exacting his revenge on Babel.⁷⁰

Cum Labium formandarum vocum instrumentum sit, sine labiis vero vox ulla proferri non possit, cum nemo non apertis labiis motisque loqui possit, recte sane facer textus pro lingua ponit labium, austum pro effectu. In universa itaque terra, vel ut Arabica habet, in toto mundo (ubi per mundam, totius humani generis congregationem nominat) erat lingua una. Id est, omnes homines, qui post diluvium usque ad transmigrationem, immensa multitudine se propagarunt, loquebantur linguam unam 71

Upon Noah's inauguration of the ear, the lips and tongues are discovered, both of which, as instruments of voice, are interchangeable in the text of the Old Testament.⁷² With the potential for language inherent, the tongue is the intelligent occupant of the noise making orifices. The loss of language, then, is not merely a cognitive loss, but the misplacement of a vital organ. The lips are the threshold of conduct between humanity and world. Limitations were circumscribed by the lips for laws that observed the passage of words, and even food (Hebraic dietary traditions attest to that). As initially shared gestures, their divergent shapes would emit incomprehensible signals to one another.

The contents of the Ark
Kircher *Arche Noe*



Like the animals, Noah's voice and groom discharges the seeds of human civilization from the prototypic Ark Codex. Gifted with the privileged knowledge of the arts and sciences, and the solace of an exclusive patriarchy, his selective insemination sires the progeny of civilization. All the traditional devices for the sovereign practice, the tools of the innocents, are disseminated from Noah into his ancestry.⁷³ But in the inevitable course of time, their intentional use degenerates into a corrupt mutation specifically invented for the slaughter of animals, the edification of architecture, and violence of war.⁷⁴ Noah is the benefactor of a second fall, a cataclysmic retribution for a rise from the depths of the plains of Shinar, to the heights of man made impropriety. For in allowing *power* to escape from the well intentional conduct of his divinely engineered genealogy, the irreversible march towards Babel is set into motion. Babylon is ultimately his doing, and for this his legacy is marked as the tragic (and drunken) prototype of redemption.

The first order of architecture is in the prototypic form of the Ark. As an architectural seed it germinates the primal tongue, the primal knowledge, the primal tools, and the primal family. Kircher describes it as the only example of the *City of God* on earth. Self sufficient and hermetic by right of a divinely inspired *economy*, a prototypic set of necessities whose limitations are dictated only for the destiny of being broken.⁷⁵ All of humanity's artifices, neutral in the face of value, originate from this city, and from the moment the Ark hits dry land they are gradually mutated and absorbed into the mechanism of history. The ark is indeed a collection of worldly assets selected to survive, but more importantly, it is the virtual lexicon to the word of god, the entire basis for the Adamic tongue.

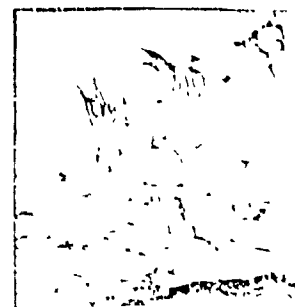


The contents of the Ark.
Kircher *Arche Noe*

The Risk of Knowing Too Much

That scholastic knowledge is strictly a human construct means that it can only be transmitted through time by a form of insemiate genealogy. The scholastic practice reflects the mode of sexual procreation. Like the virility of a manly progenitor, we praise an enduring idea for its *seminal* (semen-like) quality. Even more explicitly, the Hellenic custom for the transmission of knowledge, is for the scholar to literally inseminate his initiate by sexual coitus. Shades of this dissemination even remain in the master/apprentice traditions of our own learning institutions. By the same strategy of tracing a bloodline to its procreative origin, the scholar weaves through the genealogical ligaments of insemiate intelligence to discover the original thinker -the paradigmatic law maker. Law, and for that matter, all scholastic knowledge, is protected, protracted, and legitimized solely on the basis of the paradigmatic virtues of its philosophical grounding. In the same way that Noah is the inseminator of race, Moses, the chronological sage of the Judeo/Christian tradition, is the inseminator of knowledge.

It is often suggested that the intentions for the Tower of Babel were the offspring of an insatiable cosmological curiosity.⁷⁶ Without doubt, the motivation for such an intention is obvious, in order to see the heavens and their movements more accurately, the observer must be raised closer to their realm. The postulation of this motive is hardly speculative, for it is clearly acknowledged in the pages of the Old Testament that the Babylonians were indeed the discoverers of astrology.⁷⁷ Further still, it was in the observatory of the Tower of Belus, and under the tutelage of its namesake, that Abraham was said to have learnt the cosmic arts.⁷⁸ Thus, in the Babel poem, when the call is made for the *head* of the Tower to be raised into the heavens, or whose top shall reach the heavens, what is really being said is *let us see*.⁷⁹ If the tower is both a landmark, built *to be seen* (by day as a silhouette and by night as an elevated beacon), and an observatory, built *to see* (a platform for its curious gaze), then dialectical vision is the aspiration of this paradigm. Although drawn from a somewhat incongruous tradition, the ancient Greek conception of the simulacra focussed specifically on this dialectic of sight. To to make eyes in a statue is to see into its life, and for it to reciprocate.⁸⁰ It is perhaps this voyeuristic intrusion into the YAWEH's domain that provoked the ire of the Hebraic scribe. YAWEH's



The fall of Icarus
Andreas Alciati *Emblemata
Libellus* (Paris, 1535) p. 51

human-like jealousy was reputed to have stood in the way of human investigation and speculation. The secrets of heaven were not to be pried into, what YAWH had revealed to humanity was as much as they were ever going to know.⁸¹ Indeed many exegetes have suggested of that in Nimrod's ambition to surpass every boundary that had been originally imposed on the tribes of Noah, knowledge was the most adversarial of these limits. But as tradition holds, just as architecture is an admirable sin, the search for the intellectual limits is an honorable avocation. For regardless of their transgressive consequences, these objectives are the only substantial distinction between humanity and bestiality.⁸²

The pursuit of knowledge is commonly associated with the desire for altitude.⁸³ After all, the most fundamental of our spatial discourses seems to dwell on the dialectic polarities of high and low. We naturally associate superiority with height (the perfection of the sky), and inferiority with baseness (the corruptible sublunar world).⁸⁴ It is in fact a cross cultural standard that the seat of reverent power and its paradisiacal realm find themselves in the upper extremity of the vertical axis, and their counterparts of punishment and evil find themselves below. The authority of the *pater* is always cast in the downward direction, while submission to its voice is much swifter from above than below.⁸⁵

The bold heights of academic inquisitiveness, then, are certainly to be feared, for like the consequences of any physical adventure, transgression over clearly delineated boundaries invites certain peril. But while the pluralistic *cause* of academic freedom was never dire in tradition as it seems to be now, there was a general acceptance, if not necessarily an observance, of several prohibitive realms of knowledge:

The cosmic. It was forbidden to look at the skies, -the *arcana naturae*

The religious. It was forbidden to look at the secrets of god - the *Arcana Dei*

The political. It was forbidden to look at the secrets of power -the *Arcana imperii*.⁸⁶

Concerning the potential danger of intellectual bravado, a passage in the epistle to the Romans reads *noli altum sapere sed time* (be not high minded but fear),⁸⁷ or in *Erasmus Quia Supra nos, ea nihil ad nos* (we have not to care about things which are above us)⁸⁸ and even the caption to an iconographic plate by Nicolo' Malermi *do not seek to know high things*⁸⁹. Theologians, philosophers, and astrologers labeled as heretic, would thus be personified in the images of Icarus and Prometheus, both transgressors of the

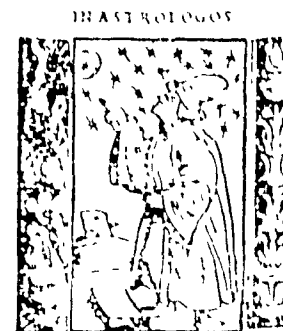
vertical, alongside captions reading *those who steal (look in to) the sky pay the penalty*.⁹⁰ In an imaginary discourse between Loyola and Copernicus, Donne relates the seriousness of this challenge:

Hath your raising up of the earth into heaven brought men to that confidence that they build new towers or threaten God againe? Or do they of this motion of the earth conclude that there is no hell, or deny the punishment of sin?⁹¹

Ultimately though, it would prove impossible for the scholar to respect these absolutist restraints. For as in the impossible aspiration to the *City of God*, the intermingling of High and Low (sacred and profane) was an acceptable, albeit penitent, concession to being human.⁹²

In the Baroque, the introduction of new scientific hypotheses were indeed considered as potential disruptions to order, even to the extent of threatening the physical nature of the universe. But nothing threatened the oligarchy more than speculations within the political realm. Science and nature were subjects entirely open to the common man, but politics were veiled under religious secrecy, still considered as unquestionable intentions of the divine will.⁹³ As the popular revolts against the Papacy and the wars of religion demonstrated the vulnerability of dogma, the scientific revolution seemed poised to abrogate the instruments of power and devour their secrets of political utility.⁹⁴

By the time of that actuality, however the moral position vis a vis intellectual inquiry had shifted dramatically. In the 1666 version of the *Pompe funebri* by Marcello Marciiano, we encounter once more the familiar allegorical figures of knowledge. Prometheus and Icarus. Prometheus is shown confidently and proudly resting his hand on the sun, with the accompanying motto *nothing is too difficult for human beings*.⁹⁵ Likewise, Icarus is depicted as the Columbian discoverer of the new world, with his accompanying motto *dare everything*.⁹⁶ Scholars were actually confident of the possibility of executing the Tower of Babel. Not out of a delusion of success, but out of a sense of valor for the effort. Even Kircher vaunted his academic gallantry by having himself lowered into the infernal mouth of purgatory (Mount Vesuvius) under the pretext of an audacious, but enlightening, reunion with the *Mundus Subterraneus*. The motto revised, should then have read *it is dangerous to know high things but dare to know*. For the *Respublica Litteratorum*, the borderless community of scientists (to which Kircher belonged), the perceived march for truth far superseded the individual



Teares for paye: and yett with a radde
 Youde of the 33 & 40000
 Youde of the 33 & 40000
 Youde of the 33 & 40000
 Youde of the 33 & 40000
 Youde of the 33 & 40000

The Astrologer

Andreas Alciati *Emblemata*
Liber (Augsberg, 1531)

commitments to the religious and political institutions that had segregated them.⁹⁷ But it is from there that the *truth* became the moniker for power.

"As those who lose their footing turn somersaults in their fall, so would the allegorical intention fall from emblem to emblem, down into the dizziness of its bottomless depths, were it not that, even in the most extreme of them, it had so to turn about that all its darkness, vainglory, and godlessness seems to be nothing but self-delusion. For it is to misunderstand the allegorical entirely if we make a distinction between the stores of images, in which this about turn into salvation and redemption takes place, and that grim store which signifies death and damnation. For it is precisely visions of the frenzy of destruction, in which all earthly things collapse into a heap of ruins, which reveal the limit set upon allegorical contemplation, rather than its ideal quality. The bleak confusion of Golgotha, which can be recognized as the schema underlying the allegorical figures in hundreds of the engravings and descriptions of the period, is not just a symbol of the desolation of human existence."⁹⁸

The Geometric Projection of Origin

The Baroque may be described as a period absent of polemic. Where, until that point, cultural epochs asserted themselves by the formation of unique tautologies, the Baroque defined itself by an introspective self-consciousness in the face of the past, i.e. history. The Baroque world discovered itself in the uncomfortable position of being a transient member of an historical continuity, caught between the agonizing wait for the apocalypse on the one hand, and the more perfected and purified variation of humanity that resided closer to the presence of a divine origin than itself on the other. The study of origins thus emerged from an intellectual pessimism that sensed a lack of control over destiny in the perceived expanse between the contemporary world and its origins.

Under such conditions the intention of historical scholarship was not necessarily to describe the process by which the existent came into being, but rather to describe what emerged from the process of becoming and its eventual disappearance into the fog of being. Origin, as Benjamin describes it, is an eddy in the stream of becoming, and in its current it swallows the material involved in the process of Genesis.⁹⁹ Thus origin could only be recognized in a willful *re-discovery*, and at the same time, a resignation to its incompleteness. Origin is the state in which the energies of the nascent history confront the present, leaving in its wake, a chronological history. In Kircher's mind, The Tower of Babel was, in itself, this confrontation manifest. Babel is forever in the state of an incomplete confrontation and construction (a permanent state of origin), making Kircher's own work a reconstruction of the incomplete. His conviction

was that the authentic lay in the origin, lurking somewhere behind in the background of the present. To the extent that the historical procedure was unique in its approach, the discovery would reveal not the essential origin, but a sympathy to its becoming.¹⁰⁰ By investing in unique speculation, the antique form was inevitably mutated as an end result.¹⁰¹

Whereas the Renaissance was dominated by a sober respect and search for the clarity of divine intentions in the empirical world, the Baroque was obsessed with its *expression*, namely in the form of a demonstrative theatre. Demonstration exploited what were assumed to be the logical mechanisms of transformation - the simulation of the dynamic world to its most accurate, detailed, and elaborate extent. The historical text of *Turris Babel*, as such, is an extravaganza. Like everything else, history is subject to the same underlying automata of metamorphosis. With the precision of a mathematical projection, the imagination can elaborately speculate and simulate the entirety of its course.

To the Baroque historian, consequently, the world was a living organism in a perpetual state of transformation. But if this transformation had an origin such as the deluge, then there was also destined to be an end. The real discovery, however, was the realization that the present did not itself belong to these historical extremities. If the present was less perfect than the fixated points of future and past, then these antipodes were temporally paradigmatic. Yet this will have opened the possibility for two forms of evaluating the course of time from its extremities - that of the bestial, and that of the perfect - creating an oscillatory alienation that would eventually become a major source of debate among Baroque historians. It was in fact the discovery of fossils in the Alps that empirically supported the theory of a universal deluge that transformed the entire surface of the earth.¹⁰² But what further fueled the historical speculation was the discovery of unknown animal species in the Americas, thereby bringing into question the whole tradition and assumption of a Eurasian Adamic history.¹⁰³ In the end, the theory of divine wisdom and origin was thrown into turmoil by the implication that there were other wisdoms, cultures, and races, lost from an earlier time.

With the decisive power of the era residing with the monarchy, order could only be maintained by ensuring the lineage of the prince. But it was precisely this mechanism that led to conflict between nations and religions at that time. To be in power was to be responsible for the legitimacy of a linear

chronology, and that lineage allowed room for only one ruler. Continuity of genealogy with the sacred prototypes at the origins of history was the only prevention against tumbling into the chaos of anarchy. If the prince were to loose the connection with his historical ancestry, he would loose the right to rule. Thus while the Baroque world began to define its structural matter as being composed of history, its stability grew more dependant on the preservation of chronology.

Out of the conviction that humanity's natural state was that of confusion, the levity of the chronological project ennobled the role of the historian.¹⁰⁴ Indeed the visualization and choreography of the chronological labyrinth depended entirely on the artistry of this scribe. After all, it was the historian who reminded the citizens, through the inscription of urban rituals and institutions into tradition, of their origins, their lineage, and their potential for self destruction. Those called upon with the authority of writing chronological history were those who literally wrote the destiny of the world by legitimizing the genealogy of the sovereign.¹⁰⁵ Thus power was wielded in the hands of the prince, but the destiny of power lay in the words of the historian. History, then, was a manipulable destiny, but in the wrong hands it was a destiny open to disruption.

As a consequence, any questioning of the original ages had to be considered with the upmost seriousness. To alter chronology by claiming precedence of a secular pre-adamic age was in fact a denial of God. Both *Turris Babel* and *Arche Noe* were hardly children's books. Rather, they were definitive political treatises whose research identified and legitimized the origins of power. Even our own contemporary historical vision finds its roots in the writing of these two texts.

For the Jesuit order, however, the historical project demanded much more than the task of insuring lineage. The writing of history had to defend the authority of the church by way of the sacred scriptures, now a ripe subject for cynical speculation by its enemies. Out of this mandate was born the institution of Propaganda, meaning literally to propagate the faith like the roots of a tree.¹⁰⁶ In the true spirit of the task of the historian, and regardless of the diversion from the objective truth, the Jesuits embarked on the monumental task of insuring that everything be put into proper concordance with the order of sacred chronology. The art of propaganda served not to falsify or aberrate historical fact, but, through the acknowledged artifice and task of the historian,

to build a bridge from those episodes that had been discovered to be contradictory to the present

As a devout and leading Jesuit scholar, Kircher thus was committed, by ordinance and volition, to the genuine authority of the sacred text, while at the same time keeping the emergent hypothesis of truth and evidence as dominant principles of his rigor. The ensuing collision was characteristic of the Baroque crisis. What was truth was the sacred text, yet the evidence usually provoked speculation to the contrary. Although we now seem to negotiate this contradiction with store ease, in the Baroque the option of its resolution by discourse simply did not exist. The practice of scientific proof emerged as the hinge between disparate truths. Rather than the self-perpetuating cycle of hypothesis and proof unleashed in the name of a *progressive* consequence, scientific proof was a retroactive demonstration of the hidden logic between glaring contradictions, a constructed *Toldot* bridging the abyss of a perilous uncertainty.

Only one universal Christian history could be tolerated. But rather than declaring all other histories as blasphemous and fantastic,¹⁰⁷ the Jesuits embarked on the crusade of absorbing the world into the Christian propagandist version of universal chronology. What was attempted was a model of history that could hypothetically absorb all the cultural divergences in the world, including those that had not even been discovered yet. But the eliminating of the divergence of chronological figures within the history of the world was a negation of a plurality, rather than a seeming tolerance towards difference.¹⁰⁸ One could even speculate that our present democratic system of pluralism is wrought out from the philosophical hypothesis of propaganda.

The analogy of secular western traditions to the Christian project was in itself hard enough. But other cultures, such as Babylonian, Chaldean, Chinese, and Pre-Columbian American, possessed their own chronologies, supposedly surpassing those of the Judeo/Christian tradition. The western chronology was forced to adapt in order to be universally legitimate. Remnants of the original Genesis can be extruded from every culture of the world, and this led Kircher to believe that there was a fundamental similarity at the ends of recorded time. The fusion of these disparate histories was created, thus, through the extension of the western Biblical chronology and genealogy to purposefully include every culture into a homogeneous world brotherhood. The tree that propagated Christianity had to demonstrate its roots through all bloodlines to include a common patriarchy.

for all of mankind. In order to do so, the propagandist would baptize historical figures such as Confucius into their *real* western identities, such as Noah, thereby giving every figure from the Old Testament a pseudonym in a foreign genealogy.

Entire pantheons would in this way be commandeered like the stealing of simulacras from a vanquished ancient city, and adopted as part of the grand plan of the western God. Where once even the wisest of philosophers were relegated to the kinder regions of Hell,¹⁰⁹ entire civilizations would be excused of blasphemy for simply not knowing any better. The justification was that they were only subject to the curse of dispersion and confusion, but by the grace of propaganda, they would be welcome again into the brotherhood of man - of Christian man.

Other histories were really false. The lack of written scriptures, and the natural dispersion of man, contributed to the mis-identity of the figures of the Old Testament. In Kircher's terms, idolatry was introduced in the confusing melee of the fall of the tower, not out of a cultural vengeance, but from a sincere misreading of who was who. Cosmic entities were mistaken, and as an extension of that, their powers and ontological forces were worshiped in the blasphemous manner of idolatry.

In the same manner that the vestiges of the original language are seen in the diversity of letters and scripts, the pantheons are allegorically interconnected through a genealogy. Like the script, there is no visual or imaged access to the origin, for the idolatrous image is what comes after the fall. The original pantheon of the gods, then, can only be speculated and alluded to in its origin. All the gods are engineered into a descent of the family of Christianity by way of their shared qualities and prodigious gifts to the human race.

The renovated lineage of Eve, all of whom are the mothers of life, the progenitors of man, the mother gods, and the givers of largess
 eve, to
 tellus, to
 Nioha, to
 Vesta, to
 Isis.

The renovated lineage of Cain, all of whom are the inventors of evil, the lovers of war, the authors of idolatry, murders, and the inventors of
 artifice
 Cain to Cam,
 Nimrod to Mars,
 Vulcan to Typhon

For both Vico and Kircher, the idea that chronology extended beyond the limits of recorded history inevitably led to the adoption of a *pre-historic* species for the expression of the earliest stages of humanity. Vico transformed the mythical figure of early man into an historical *other*. His introduction of a feral beginning for mankind implied a state of being that was almost biological in its otherness, thereby necessitating what was perhaps the first hermeneutical project to speculate on the psychology of a different historical being. Pre-History became a stored time that would accept the divergences and inconsistencies that otherwise did not fit into the sacred chronology.¹¹⁰ The extension of a chronology into a fertile beginning is the same for us now. In order that the entire spectrum of the world might have a common ground, natural or human theory reduces our origins to the lowest common denominator of single celled life.

Regardless of the tortured path of scholarly metamorphosis between extremities, the assumed authority of the sacred scriptures necessitates linkage. Absolute licence is encouraged, virtually anything may be conjectured for the text to made truthful. Speculation is the motor of Baroque scholarship, especially if its end serves the legitimacy of the text.

An example of this would be Kircher's recounting of the migration onto the plains of Shinar. As described above, the Old Testament orients the migration from Mount Arrarat towards the east, yet Baroque cartography of that region seems to subvert the credibility of this course. Kircher accepts the text as allegorical, but he also acknowledges that its geographical contradiction is problematic.¹¹¹ Down to the most minute of details, Kircher demonstrates a speculative recreation of what would be a logical itinerary for this journey, if it was to be consistent with the sacred text. But for this demonstration to serve as proof, the evidence must be reasonably adjusted. Kircher places the time between the conclusion of the journey and Babel at 275 years. Speculating about the journey using the geographic knowledge of the day, he arrives, by his own estimates, and without any possible reference to the biblical text, at the following itinerary:

195 years on the mountain

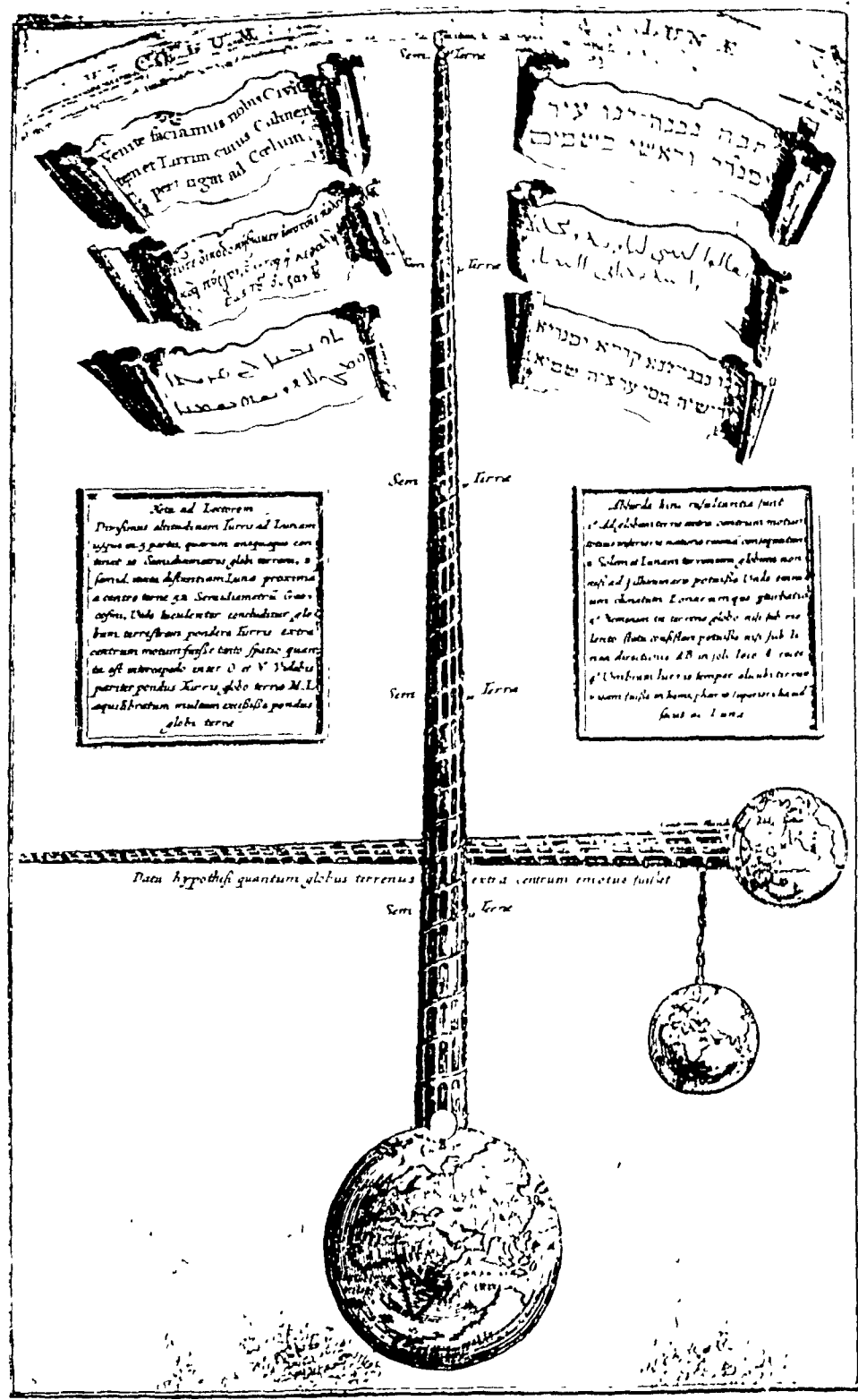
75 years in the flatter regions

5 years in the Journey to Shinar.¹¹²

Even then, the truth is still not solidly proven. To convince the reader of the authenticity of the eastward orientation, he explicitly manipulates the names of the regions and their maps so that they *appear* to support the biblical account. By contemporary scientific practice, this *doctoring* of the truth would be considered as nothing less than an outrage. On the other hand, this may be the first mandate of the scientific project: to accurately support the known truths, and examine the intricacies of paradoxical chasms that are progressively discovered to lie between them. The unity of truth and evidence, or even cause and effect, was never intended as an emancipatory vehicle for an escape from the traditional world. Rather, it was intended as the glue that held the world together in the face of its disintegration.

Proof can only be arrived at by the means of an impossible paradox. Gravity will then be explained along the terms of an apocalyptic demonstration, Otherwise known as a *Reductio Absurdem*. Ecclesiastical physics confronts the hypothetical model of the monad.

"Sequitur quarto. Hanc Turrim pondere suo multis parasangis superasse Terram; quod ita ostendo. Si igitur totus terrestris globus ad hanc fabricam complendam non erat sufficiens, ergo si aliunde divinitus suppeditata materia Turris demonstratae magnitudinis super terram fulset elata, necessarium erat, terram tantum extra centrum universi, utpote leviores extre, quantus erat excessus ponderis Turris supra pondus terrae quod si ita ergo totus terrenus globus extra centrum universi, cum ruina totius mundi extitisset."¹¹³



Demonstration of the
Tower's fallure.
Kircher *Turris Babel*

For the Jesuit school, there is no other purpose to creative mathematics than to serve the goal of proof. But, by the same token, it is an even more powerful instrument in discrediting the secular. As paradox is resolved by

manipulating the absurd into apparent reason, reason is manipulated into a glaring absurdity. By employing the *Ratio Absurdem* for the sake of a larger argument, Kircher sets out to demolish the credibility of Diodorus's account of the magnitude of Babylon. He begins with his own *reasonable* tally of the work force (two million slaves) in constructing the walls of the city, and incorporates the figure into Diodorus's account. Exploring the contradiction between the size of the city and that of the work force, he carefully demonstrates its falsehood.

If (Diodorus's area),
 And 1 stadia = 1/8th of a roman mile
 And the wall thickness is 125 passus
 And if one allows 1 square passus for every worker,
 Then the surface area will allow room for only 3750 persons
 By that account, the figure is far short the 2,000,000 slaves that were really there. Thus
 Diodorus's account is absurd.

Even though the emerging scientific consciousness had radically liberalized the conduct of questioning, the power structure of the day remained firmly embedded in the tradition of lineage. In the context of deepening commitment to empirical precision, chronology had to be ascertained at its precise moment of reference. But of even more significance to the scholarship of power was the temporal convergence of both chronology (lineage) and topography (nation). It was assumed that the contemporary world emerged from a singular biological and geographical source. At this time, nationalism, both geographic and ethnic, engendered the greatest conflicts in centuries on the European continent. Language and nationhood began to inscribe themselves along the landscape of the world by distinctive and exclusive boundaries. Yet in the seventeenth century, there was no mechanism to resolve the geo-political disputes of conflicting nationalism other than that of genealogical legitimacy. War was primarily an instrument of legal necessity to prove a divine right. By force or conviction, those who could trace their heritage to the family of Noah in the original age could legitimately claim power.

A typical claim to legitimate rule works its way down the (family) propaganda tree.¹¹⁴ Within the theatrical tradition, the genealogical litany would be mechanically recited. This recitation maps the play over every possible convolution generated by the mechanism of history. Among the many hereditary claimants, the central force in this rivalry of nations was the Christian empire, namely, the Holy Roman Empire. At no other time was its command so powerful, yet its authority so suspect. Although the apocalyptic appointment of

the second millennium was far away, the certainty of its diametric extremity made it a forgone conclusion.¹¹⁵ For the Jesuits, then, the litany concentrated on the adventures of the Old Testament, the martyrs, and most specifically, the life of Christ.¹¹⁶ In the Jesuit tradition of St. Ignatius's spiritual exercises, every event was regarded as having an inexhaustible potential for demonstrative expansion. Details were the asset of a rigorous practice of a monadologic science. Every possible feature extracted from sacred text would be perfectly articulated and considered worthy of infinite expansion.

Exploring the detailed personal history of the Baroque ruler was the key to a legitimate right of Ascension. No detail was excessive in the recounting of his deeds and moral exploits. Indeed, the full understanding of the spectrum of power depended on the accurate demonstration of his profile.

The first ruler is God, the patriarchal father. By naming him so, the deity is linked forever to humanity by bloodline. But the rule of this bloodline is conversely tied to the divine federalism. The opening lines of the poem express the *whole world*, meaning that all the inhabitants of the earth dwell within one place and are of a single family.¹¹⁷ For the Baroque, this is the paradigm of unity, the first and final episode of the human tragedy. But the growing dependance on historical scholarship will imply a new disposition of ontological principles: the unity of time taking precedence over the unity of place.¹¹⁸

What makes the Baroque priority of a temporal order over the spatial so radical is that it signals a fundamental departure from the traditional distinction between western and Hebraic perceptions. Furthermore, one senses that the Baroque view of time is, in fact, sympathetic to the Hebraic.

Hellenic myth places the origin within a spatial location of reference. The time of the gods is indeed anterior to the present, but its episodes are fixed to a specific geography. The ideal state of the lost golden age in Plato's *Critias* is specifically located in Atlantis.¹¹⁹ As an extension of this, even our own perception of time, according to Bergson, is ultimately spatial. That is to say, we can only articulate it with terms analogous to space: point, line and segment.¹²⁰ Time's measure is excluded from the spatial aspects of movement and place in our consciousness. Instead, it is an internal standard, engendering the mechanism of chronology and accumulating the events that constitute history, pauses and all.¹²¹

The traditional Hebrew consciousness experiences it somewhat differently. Here the standard of time is determined specifically by content, and not by the homogeneous abstraction of a spatial structure.¹²² To the Hebrew mind, the world and its phenomena are defined by their extremities. Time becomes the space of action, instead of examining the object, one examines the event.¹²³ It finds itself coincident and fused entirely with content: a territory would be described by the nature of its boundaries rather than the expanse between them. If there is nothing of definition within the perimeter, the void is not mapped, there is simply nothing to map. As a consequence there is no such thing as a segment of time, for that is our prejudice. Instead an event is read simultaneously as a cycle of its terminus. The episode of Babel, for example, is described only in terms of its beginning and end. By seeing an episode strictly from its content, its substance can appear in any temporal scale. The episode could be 5, 10, 100, even a million years in duration.

Whereas the course of western chronology is advanced by the ongoing increments of the cosmic cycle (an accumulative measure of time determined by the referential movement of bodies through geometric space), the Hebraic perception of astral phenomena identified these objects not as bodies, but as *luminaries* whose rise and fall in intensity, defined temporal rhythm. Luminaries, are seen for their consequence, *high noon* is the sun's most intense moment of the day. The sun, moreover, grows rather than rising from the horizon. In addition, the luminaries are seen for their obvious moral implications: light and dark, good time and evil time. Thus, when the first words of YAWEH proclaim *let there be light*, its true resonance in the Hebraic sense is *Let there be time*.¹²⁴

Hebraic duration and the instant, exist in concentric rhythms and pulses of ever expanding scales - from the smallest rhythm of the body to the astral rhythm of the luminaries, and finally to the eternal rhythm of the universe.¹²⁵ The rhythms do not integrate into a linear sequence of cycles, for they each resides as an internal cycle of the next. Time as a sequence of eternal cycles is even ingrained into the language. Thus for example the word signifying recurrence in Hebrew coincides with duration.¹²⁶ In this context, the poem of the dispersion is a cycle of polar extremities within the gap of an even larger cycle.

The Hebraic world is composed entirely of historical matter. The universe is the sum total of interconnected historical events, that find their roots in a first cause to the effect of history.¹²⁷ These events are dialectical episodes that place man's predictable and scattered (if at times righteous) purposes.¹²⁸

consistently at odds with the unrevealing, and inevitable purposes, of YAWEH.¹²⁹ History, thus, is a chronological play of man's culture resulting from a never ending dialogue between human desire and its conflict with an unalterable final destiny. The largest events that determine the course of the history of the universe, such as an apocalypse or a universal deluge, are, both on God's part and man's, a product of a *Human* character.¹³⁰ History is a recurring body of human episodes tied to the design of the *Toldot*. This opens the possibility for it to recur in the form of prophetic thought, where mythological views of the first cause are translated into prophetic histories of the inevitable future.¹³¹

Prophesy would equally allow the Baroque culture to define itself using the allegorical figures of the past as manifestations in their own time: the Anti-Christ finds himself in the form of Nero, or the pope finds himself in the form of Nimrod. This obsessive fascination with Hebraic tradition on the part of Baroque intelligentsia was hardly gratuitous; however, Hebraic perceptions at all levels - the lineage of the *toldot*, the universality of history and nation, and the notion of an allegorical language common but hidden to all in the *cabala* - to name but a few, had a sympathetic resonance with the most vital concerns of that time.

The episode of the Tower of Babel is particularly relevant to the Baroque, exposing a dialectic of time that emerges in this period of historical introspection. It represents the ostracizing of humankind from their cognizant participation in the eternal metronome. The human endeavor of an eternal conclusion (the Tower) is exhausted by incompleteness (the ruins). It is from this point on that humanity is condemned to the sequence of time, a sequence throwing language into tense, and mortality, necessitating the obligation to the *Toldot*. Humankind is thereafter excluded from cyclical destiny, but subject to its inevitability.¹³²

As of every paradigm, the Tower of Babel represents the transgression of limits. The limits here are obvious, for we have grown used to associating it with height and the invasion of heaven. But in light of Hebraic perception, Babel is, as well, about the limits and the dominion of time. While the limits imposed by YAWEH are in fact infinite, the self-inflicted limits, the transgression of mortality and genealogy, are ultimately definitive.

Origin is the irreducible substance of the historic world. Even though the world was seen as being on a progressive course toward an end of apocalyptic ruination, the original truth, the object prior to its itinerary of decay, was transcendental to it as an idea. We get a sense of this in the Baroque preoccupation of calibrating the present with the standard of an original language, an original architecture, an original generation, and finally, an original earth. Everything is in a progressive state of decay from its original version. And yet this original version is so abstract, and so distant, from any perceivable evidence in the present, that it must be considered as fundamental to the objective presence. Origin begins at a point, or rather, it is the point itself. From this point alone, it is *projected* through the geometry of a decaying time into its present iteration. The lines between the projective source (the paradigm) and its manifestation (a degenerated contemporary) are rigorously drawn by the historian in a mode of hermeneutic conjecture that concurrently could even be projected into a *future* speculation.

The origin is thus the source of temporal projection. But the coincident feature of this mode of thought is that it is also the source of spatial projection. For Caramuel della Pobkowitz, an architectural contemporary and friend of Kircher's, all space was a deteriorating projection from the sacred locus of Jerusalem. As with Burnett, all the natural features, such as mountains, riverbeds, etc., were projected and decayed from these original lines. The only way, consequently, for architecture to be consistent with this was to build under the assumption that everything around it derived from that projection, and to adjust it accordingly. The presence of the order would now explicitly coincide with the oblique lines of a spatial origin. All must be adjusted to to give the illusion that the ideal ground (Jerusalem) was never departed from, even in the relative movement of stairs.

Consistency is crucial to the world of appearances. It is for this reason that Caramuel de Pobkowitz introduced the practice of *Arquitectura Obliqua*. The assumption was that all must be constructed with straight lines (in order to deter moral and visual crookedness). The purest and the most oblique of these lines are those of divine light emanating from, and bound by, the windows of the temple of Jerusalem. In an *oblique* architecture, the referential classical order framing transitional components, such as stairs, were distorted in such a manner that they might appear as continuous from the ground to the top, thereby implying a relative continuity with the ground.

The familiar spiral ascent of the Tower suggest corresponding intentions in the geometric reasoning of movement as found in *Arquitectura Obliqua*. Derived from Herodotus's description of its *winding way*, most representations of the Tower in the late renaissance and onwards tend to illustrate its helical ascent as the fundamental catalyst of its presence. Essentially, the helical incline wraps its way around the body of the tower towards the expectant summit until it reaches the extent of construction. The helix itself is ornamented as a continuous and ascending *primit piano*, thereby creating the paradoxical illusion of a limitless escalation within the traditional limitations of a proportioned and sequential definition of vertical intervals. The climb is consummated strictly within the confines of an illusionary solid ground. By this illusionary gesture the ground is literally raised above the horizon without breaking the bonds of its terrestrial limitations.

The same reading may be extracted from the most famous representation of the tower by Breugel. Here it is implied that material gravity can be mastered by the distortion of ornament alone. Without any apparent distinction of limitations, the architectural order may infinitely rise out of the ground and bring the matter along with it. The material world is one of appearance, hence the manipulation of ornament through man's craft, which ultimately holds the potential to allude any mastery of it.

For Kircher, the helix is a paradigmatic agent to the projective order of the universe. Kircher's helix is a self-perpetuating geometric mechanism derived from basic Pythagorean principles, such as the golden section, yet vividly present in the encyclopedia of the natural world, as seen in a cone shell or a bull's horn.¹³³ Self-perpetuity is critical in explaining the incremental growth of the tower. The builders of the tower attempted to create their own universal order by appropriating the geometry of the natural mechanisms of life and growth. The *winding way* is a self-perpetuating labour simultaneously and interdependently giving rise to the means of construction and the form.

But this is the first attempt with the tower, the paradigmatic origin of the idea. In subsequent editions of the *winding way*, the paradigm deteriorated from its comprehensive state of inception to an imitation of itself in the form of ornamentation. To the extent that the helix is a natural geometric order, all the following constructs would be mimetic to the original, and thus inferior. Kircher stresses that this is in fact the natural course of ideas, demonstrated in his description of the tower of *Zeus-Belus*, the second tower to be built in the city of

Babylon *Zeus-Belus* could only be a crude approximation of the first, and at best, follow its geometric example by ornamentation. At first glance both towers seem identical in formal intent on. Yet upon closer inspection, *Zeus-Belus* is found not of a complete body, as is the original tower. Rather, it is composed of eight identical stages, piled one on top of each other in a sequence of diminishing scales. The helical motif is thus but an ornamented illusion of the original tower's incremental construction and ascent.¹³⁴ This method of construction, to be found only in the original, is determined in succeeding versions as a theory to the practice of ornament, it is only an *appearance* of the paradigm.

Projection emerges from the invisible theoretical into the material. In the case of the Tower, it emerges as a point emanating from the historical/geographic site of the temple of Jerusalem.¹³⁵ The order of this work is in the substance of a vanishing point—an essential derivative reduced beyond any scale into the absolutism of a theoretical mass. The implications for such an adventure in reasoning however are drastic, for the only authentic matter in the world would be in the form of a theoretical idea. The standard of measure, like the standard of history, is its most absolute nucleus: the derivative. As we see again in the work of Emanuel della Robbia, the derivative is the substance of the logarithmic calculation. From a sacred (theoretical) point of matter the exact nature of the world is hypothesized out of a projective relativism.¹³⁶

In explaining the propagation of humankind from the landing on Arrarat to the construction of the Tower, Kircher exhaustively demonstrates its mathematical growth from the first three progenitors. The underlying mechanism of the demonstration is self-propelling and analogous to the exponential propagation of sound. Like the helical geometry of a horn, the first monad of sound is multiplied by the accumulative nature of the mechanism. The inevitable course of this historical episode is determined and demonstrated, consequently, by the universal phenomenon of spiral growth.

**Calculus propagationis generis humani ad Turris
fabricam.**

Primis 30 annis post diluvium tres filios

generasse---360 filios & Filias

His multiplicatis per 60 annos post diluvium, producetur---

--21600 progenies liberorum

His multiplicatis per 90 annos, à diluvio, dabitur---

1944000 propagatio hominum.

**Atque hi multiplicati per 120 annos, & hinc usque ad Turrim Babel, producent
23328000000 propagation hominum.**

**Non hic ulterius procedimus, cum res prope in infinitum
procedat ¹³⁷**

In describing the tower of *Zeus-Belos*, Kircher explains the decreasing size of the ascending stages as following what he calls the *laws of optics*. Each stage regresses in height in proportion to its mass. In short, Kircher alludes that the shrinkage of the elements in virtually every aspect of scale is essentially an optical transformation. Optics in this case is not the observation of the same at a larger scale. Rather, in a world where apparition supersedes the theoretical continuity, it is something entirely other than the subject at hand. Thus when one looks at the object through an optical apparatus one observes its apparition, what is in fact a different object, a proportionate macrocosm of the original. Moreover, the proportions of a spatial object may be read as a temporal function. Kircher thus explains worldly decay as being a progressive course towards the smaller. Age not only breaks matter and ideas into their most constituent parts, it breaks it into its *smaller* versions. For example, all the human constructs such as the Tower of Babel and the temple of Solomon, that have succeeded their paradigmatic origins appear smaller with the course of chronology. The world has grown smaller, even the life span and bodily scale of humanity has dwindled. Thus the optical law cited in explaining the tower of *Zeus-Belos* speaks not only of a diminution of a spatial scale due to a geometric foreshortening, but as well of a diminution due to the temporal law of decay. What we see in the Tower is a temporal sequence of proportions leading to the form of a tower. The base of the tower is the first iteration of the object in space and time. Each succeeding object in Ascension is further from the original than the last, leading finally to its reduction beyond the scope of perception into the theoretical realm of infinite future and finite size. Decay, then, does not necessarily mean a transformation in the form and essence of the object, but rather, a scaled and proportioned transition relative to its proximity from the paradigmatic origin.

The rules of decay and proportion that we find in Kircher's theory of light will apply as well to sound.¹³⁸ A note struck is subject to decay. The note decays not in the mutation of its form, but in the proportional and consistent decline of its scale. Thus in the composition of *Zeus-Belos*, if we consider the bottom segment of the tower to be like an inaugural note, then its eventual decay is in the diminishing echoes of the same. What fascinated Kircher,

however, were the implications of this mechanism to the amplification, rather than the diminution, of sound.¹³⁹ For this he returns to the perpetuating geometry of the helix, this time in the form of conc shell. The shell propagated sound in the *reverse* projection of decay, by increasing the note proportionally from its origin. That this mechanism was a consequence of a natural phenomenon implied that harmonic proportion was in fact the foundation of a universal law. The geometry of the diminishing same was applicable to every aspect of the universe. In introducing the concept of the decalogue in the tenth book of *Musica Universalis*:

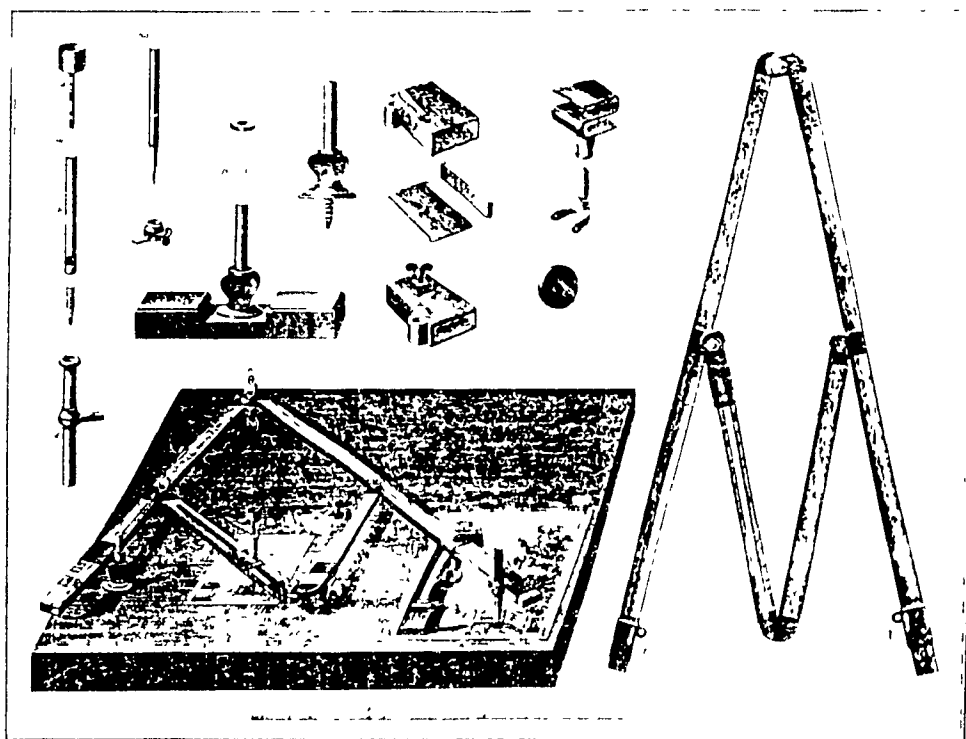
.....In elementorum mistura, exactam quadam rerum ex Consono-dissonis constatam Symphoniam, in Coelorum admirando consensu absolutissimum harmonicarum proportionum systema; in humani corporis fabrica, politico mundo, Angelico, diuino, mirum harmonicarum proportionum ordinem, atque innumera, quae ut dixiNeque hoc contentus, modos & rationes insinuat, quibus ad secretarum Artium, Physicarum, Medicinae, Chymiae, Logicae, Mathematicae, Metaphysicarum, Theologiae adyta, harmonicarum proportionum subsidio, sagax philosophus pertingere possit.¹⁴⁰

Thus while the traditional dialectic between the equal, but opposite, worlds of *macrocosm* and *microcosm* still applied, in the Baroque, this theory of harmonic proportion will lead our perception of the universe into the theoretical space of infinitesimal relativism. Universal entropy is a balance of proportionate objects rather than mutable mass. The composition of matter is reducible to the most irreducible of substances: the monad, an *object* so fundamental, if infinitely small, that it projects itself from the theoretical realm into that of the phenomenal by the proportions of scale. In concordance with this fundamental Baroque assumption, the lines that engulf the earth in *Arquitectura Obliqua* are indeed straight, their variance lies in scale rather than their quality.

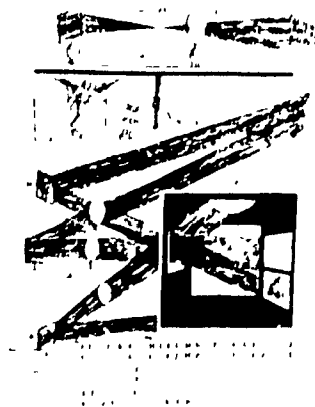
The monad is theoretically finite in size, but infinite in number. Within this logic, it represents an intellectual purity at the infinitesimal level. The corrupt and impure world is really the product of a perfected destiny. For regardless of its obvious aberrations, it is ultimately composed of invisible and indistinguishable perfections. The monad leaves the realm of the theoretical particle (which is finally real) and is projected into the perceived world. Everything begins in a purified form and arrives in a proportion of that origin. The diversity of the world is really only a matter of the variable disposition of these elements. Fundamentally, the world is composed of one prototypic unit, and thus regardless of its tortuous journey prior to arriving in the phenomenal, the monad provides the ultimate consistency of singularity. What is implied here is that the

matter of the world is excluded from transformation. Ideas (or the allegory) are immutable, and do not digress from their purified state. Our world of objects and our life among them is not excluded from the origin. Rather, it is the measurability of the dispersed ideal that gages our metaphysical limitations. Traditionally, proportion transforms the concrete to meet the *appearance* of the theoretical. But in the Baroque everything is in itself a projected appearance of the theoretical monad.

Duplication Instrument.
Kircher *Ars Magna Sciendi*



The entire substance of the world was reduced to a particle so infinitesimal in size, and so infinite in number, that everything became representational while nothing remained embodied. For embodiment was projected into the finite and infinite extremities of the monad. Whatever was encountered, whatever was seen, whatever was done, and whatever was made, was only a shadow of an original source. Where the Renaissance ascribed a firm validity to the experience and truth of the senses,¹⁴¹ the Baroque expressed a notable distrust of the empirical as but a shadow of a truer presence. With this distrust, was a resignation to, and even a indulgence in, the promotion of appearances. The search was for a transcendent truth that went beyond the appearances of either beauty or evidential proof. The most obvious example was in the elaborate spectacles of the Jesuit theatre. In response to a representational world, human expression indulged in the experimentation, and exploitation, of representation itself. To the extent that the empirical world was assumed to be a



Projection Machine
Kircher *Magnum sive de Arte Magnetica*

projected shadow, human endeavor was the shadow play -the manipulation of appearances. But despite its appearances, the Baroque was not nihilistic by modern standards, for truth was still fundamentally driven by ecclesiastical priorities. Where the symbol was once the sole expression of this truth, it no longer made sense in a world where empirical embodiment was outright rejected from the interim of lived experience. The world became a book, something outside of a physical presence, yet embodied intellectually as allegorical expression. The expression of the allegorical, however, is radically different from that of the symbolic. Where the symbolic was arbitrated by its immediate presence within its material manifestation, the allegory was accomplished in its intellectual universality, and its flight from the physical. Allegory is like the text of a book, its meaning unwavering in the assortment of its various scripts. Like the monad, then, its transition to the physical scale, as in art and architecture, is a direct projection into a proportionally larger scale, rather than a manipulation of its content. If the theoretical is by its nature absolute, such as an ideal geometry, then its implications in the practice of architecture are revolutionary. The built no longer becomes a conscious attempt to mimic the theoretical in order that it may appear as ordered. On the contrary, the construction itself is the theoretical with a regard for its optical consequences. Architecture no longer represents, for it becomes the allegorical representation itself.

- 1 Benjamin, Walter *The Origin of German Tragic Drama*, p 37
- 2 Ibid
- 3 Ibid , p 36
- 4 Kircher *Turris Babel*, p 148
- 5 Frazer *Folklore in the Old Testament*, p 362
- 6 Fishbane, Michael *Text and Texture Close Readings of Selected Biblical Texts*, p 17
- 7 Kircher *Turris Babel*, pps 164 - 166
- 8 Kircher *Turris Babel*, p 168
- 9 Shuckford, Samuel *Sacred & Profane History of the World Connected* (1728)
- 10 Kircher *Turris Babel*, p 28 " and full of Fox-like craftiness and cleverness "
- 11 Plato *Cratylus*, p 423
- 12 Ibid , p 429
- 13 Ibid , p 388
- 14 Ibid , p 389e
- 15 Ibid , p 390e
- 16 Rossi, Paolo *The Dark Abyss of Time The History of Nations From Hook to Vico*, p 142
- 17 Ibid
- 18 Kircher *Turris Babel*, p 170
- 19 Gen 12 2
- 20 Walton, John H *The Tower of Babel*, p 46 (from the epic of Gilgamesh III 140 - 150)
- 21 Ibid , p 46
- 22 Plato *Cratylus*, p 393d
- 23 Du Bartas *La Seconde Semaine*, p 432 (lines 395 - 409)
- 24 Kircher *Turris Babel*, p 162
- 25 Plato *Cratylus*, p 426
- 26 Benjamin *The Origin of German Tragic Drama*, p 175
- 27 Lobkowitz, Caramuel *Arquitectura Recta & Obliqua*, p 93 (2)
- 28 Benjamin *The Origin of German Tragic Drama*, p 172
- 29 Plato *Cratylus*, p 426
- 30 Rossi, Paolo *The Dark Abyss of Time The History of Nations From Hook to Vico*, p 225
- 31 Ibid , p 242
- 32 Vico, Giambattista *The New Science*, p 20
- 33 Benjamin *The Origin of German Tragic Drama*, p 163
- 34 Ibid , p 166
- 35 Ibid , p 159
- 36 Ibid , p 20 (introduction by George Steiner)
- 37 Ibid , p 163
- 38 Kircher *Turris Babel*, p 148
- 39 Cassuto *A Commentary on Genesis*, p 237
- 40 Ibid , p 237 (from Rashi)
- 41 Ibid , p 237 (from Ibn Ezra)
- 42 Gressman, Hugo *The Tower of Babel*, p 46 (Plutarch's *De Iside et Osiride* according to Eudemos the transformation of the earth into a flat geometry will accompany the Pentecost)
- 43 Weiner, Sarah Elliston *The Tower of Babel in Netherlandish Painting* p 46
- 44 Ibid , p 54
- 45 Kircher *Turris Babel*, p 127
- 46 Fishbane, Michael *Text and Texture*, p 35
- 47 1 Corinthians 13,14

- 48 Graves, Robert & Patai, Raphael *Hebrew Myths The Book of Genesis* p 126(h)
- 49 Kircher *Turris Babel*, p 132
- 50 Josephus Flavius *The Works of Josephus. Complete and Unabridged, New Updated Version*, p 35(120)
- 51 Ibid., p 35(120)
- 52 Coptus, the city known to Pliny & Pausanias and Plutarch, was itself not to be found All of the manuscripts, however, were found intact and preserved in Coptic monasteries see Allen, Don Cameron *Mysteriously Meant*, p 122
- 53 Benjamin *The Origin of German Tragic Drama*, p 170
- 54 Rossi, Paolo *The Dark Abyss of Time The History of Nations From Hook to Vico*, p 123
- 55 Du Bartas *La Seconde Semaine*, p 432 (line 370)
- 56 Kircher *Turris Babel*, p 11 "there is scarcely a language to be found in the world which does not suffer corruption, whether from neighboring regions and provinces and the nature of the locality, or from the invention of new words "
- 57 Ibid., p 10
- 58 Even now we are experiencing the extremities of a similar paradox Everything is built not to last, it is far more difficult to build a *Time capsule*, for magnetic tape does not last for more than a few years, and even the composition of the paper that we use now is far more likely to deteriorate with time than, paper made in the past Ironically the only thing that has lessened in the potential for deterioration is our human bodies It has been noted by many funeral home owners that the ingestion of artificial preservatives have made our cadavers more resilient to deterioration than they have been in the past
- 59 Kircher *Turris Babel*, p 155
- 60 Benjamin *The Origin of German Tragic Drama*, p 210
- 61 Kircher *Turris Babel*, p 10
- 62 Rossi, Paolo *The Dark Abyss of Time* p 212
- 63 Rossi, Paolo *The Dark Abyss of Time*, p 168
- 64 Kircher *Turris Babel*, p 129
- 65 Ibid., passim (Especially so in Book III)
- 66 Du Bartas *La Seconde Semaine*, p 433 (lines 431 - 450)
- 67 Kircher *Turris Babel*, p 7 " and commanded me in his infinite mercy, and by his very words, to build an ark "
- 68 Ibid., p 7
- 69 Ibid., p 6 "Pay attention to what I say, take in with your ears the words of my mouth, the words of truth, the words of life, the words of salvation "
- 70 Walton *The Tower of Babel*, p 84 (From Atrahasis)
- 71 Kircher *Turris Babel*, p 10 "Since the lip is an instrument for forming sounds, no sound can be produced without the lips Since no one can speak without opening and moving his lips, the sacred text rightly and correctly uses "lip" for "tongue", as the cause for the effect "In the whole earth", or as the Arabic has it, "in the whole world" (using "world" for the sum total of humanity) there was one tongue, that is all the people who after the Flood and up to the transmigration had grown into an immense multitude, spoke one tongue "
- 72 Ibid., p 10
- 73 Ibid., p 27
- 74 Ibid., p 13
- 75 Ibid.
- 76 Ibid., p 35
- 77 Irwin, W A "The Hebrews", in Frankfort, H & H A *The Intellectual Adventures of Ancient Man* p 248
- 78 Gressmann, Hugo *The Tower of Babel*, p 19
- 79 Kircher *Turris Babel*, p 35
- 80 Fontesi-Ducroux, Françoise *Dédale*, p 80
- 81 Irwin, W A., p 280

- 82 Rossi, Paolo *The Dark Abyss of Time: The History of Nations From Hook to Vico* p 202
- 83 Irwin, W A p 280
- 84 Ginzberg, Carlo "High and Low: The Theme of Forbidden Knowledge in the Sixteenth and Seventeenth Centuries", *Past and Present*, No 73, p 31
- 85 Laponce, J "Hirschman's Voice and Exit Model as a Spatial Archetype", *Social Science Information*, xiii No 3 (1974), p 73 (Even our contemporary relationship to power submits to this basic scenario. If voice occupies a vertical axis, then the horizontal is mobility. Hence, politics, for its subservience to authority and voice is vertical and economics for its planar exchange and mobility is vertical.)
- 86 Ginzberg, Carlo "High and Low", p 32
- 87 Ibid
- 88 Ibid
- 89 Ibid
- 90 Ibid
- 91 Ibid, p 35 (From *Ignatius his Conclave* by John Donne)
- 92 Kircher *Turris Babel*, (dedicatoria) IIII
- 93 Ginzberg, Carlo "High and Low" p 37
- 94 Ibid, p 35
- 95 Ibid, p 38
- 96 Ibid, p 38
- 97 Ibid, p 38
- 98 Benjamin p 230
- 99 Ibid, p 54
- 100 Ibid, p 54
- 101 Ibid, p 59
- 102 Rossi p 7
- 103 Ibid, p 11
- 104 Benjamin p 95
- 105 Ibid, p 64
- 106 The Oxford English Dictionary
- 107 Rossi p 152
- 108 Ibid, p 152
- 109 A good example of this would be in Dante's exclusion of the pagan known to be outside of the Christian tradition of thought and relegated to what amounts to a paradisiacal annex to hell
- 110 Rossi p 158
- 111 Kircher *Turris Babel*, p 11
- 112 Ibid, p 12
- 113 Ibid, p 40 "It follows, fourthly that this Tower would by its weight have exceeded the earth by many parasangs (1 para sang=3.5 miles). If then the whole globe of the Earth would not be sufficient to complete this building, and therefore if a Tower of the demonstrated magnitude could be erected upon Earth with God providing the requisite material from elsewhere, it would be necessary for the faith for the Earth to be as far above the centre of the universe as the excess weight of the Tower surpassed the weight of the Earth. Were this so, then the whole earthly globe would be outside the centre of the universe and the whole world would be destroyed."
- 114 Meaning literally to *propagate*, like the roots of a tree, the faith. *Propaganda Fide*
- 115 Benjamin, p 80
- 116 Ibid, p 80
- 117 Cassuto *A Commentary on Genesis*, p 237
- 118 Benjamin, p 60
- 119 Bowman, *The Difference Between Greek Thought and Hebrew* p 124
- 120 Ibid, p 126
- 121 Ibid, p 126

- 122 Ibid. p. 131
- 123 Ibid., p. 140
- 124 Gressman, Hugo *The Tower of Babel*, p. 33
- 125 Bowman p. 134
- 126 Ibid., p. 136
- 127 Irwin, p. 378
- 128 Ibid., p. 323
- 129 Ibid., p. 323
- 130 Ibid., p. 321
- 131 Gressman, Hugo *The Tower of Babel*, p. 39
- 132 Francfort, H & H A. "Myth and Reality", in *The Intellectual Adventures of Ancient Man*, p. 26
- 133 The metaphysical vision of the end of history has finally straightened the convergence of the helix. The double *Helix* subverts our mortal chronology for immortal timelessness. Supremacy over space and time at the biological level, we finally have a measure of control over the outcome of history. As we presume to dictate the ends of our lines of history, we have presumed to have arrived at the threshold of immortality and the abyss of timelessness.
- 134 The same can be said for the confusion over the lantern in the church of Saint Ivo by Borromini. The common interpretation is that it represent the tower of Babel due to its helical form, but in reality it is subparadigmatic and complete thus implying more so the Pharos of alexandria (an allegory to the Pentecost) as opposed to the Tower itself. Hauptman, William "I luceat lux vestra coram hominibus, a new source for the spire of Borromini's S. Ivo." *Journal of the Society of Architectural Historians*, XXXIII/1 (Mar 1974), pps. 73-79
- 135 Tobkowitz Juan Caramuel de *Arquitectura Civil Recta & Oblicua*, p. 95(3)
- 136 Ibid. p. 185(5)
- 137 Kircher *Turris Babel* p. 9. 'Calculation of the propagation of the human generatins since the construction of the tower
- From the first 30 years following the deluge three sons generate 360 sons and daughters
- This multiplies after 60 years following the deluge to produce 21600 prodegies
- This multiplies after 90 years following the deluge by the same reasoning a human propagation of 1944000
- Applying this multiplication over 120 years in following the Tower of Babel produces a propagation of 23328000000 humans
- Using the same procedure we arrive at an infinite number '
- 138 Bach p. 215
- 139 See, *Musica Universalis* for an elaboration on the theme of this perpetual growth
- 140 Bach, p. 226. From Kircher's *Musurgia universalis*, "in the mixture of the elements a kind of exact symphony of things arranged from the consonance-dissonance in the wonderful concord of the heavens see the most absolute system of harmonic proportions, (you will see also) in the fabric of the human body, in the political world, the angelic world, the wondrous order of harmonic proportions (and also in innumerable others). More over not being content with this, I have penetrated into the means and methods by which the sagacious philosopher can attain with the help of harmonic proportions to the sanctuaries of the secret arts of physics, medicine, chemistry, logic, mathematics, metaphysics and theology."
- 141 Warnke Frank J. *Versions of Baroque: European Literature in the Seventeenth Century*, p. 21

Conclusion

The coercion of architecture into the mode of allegory is a symptom of a much broader issue than the dialectic of representation and truth. Once articulated by grace of its adjustment to *appear* as purity manifest, the idealized geometry of the Baroque superseded everything, including its appearance, by right of a predestined theoretical value. The standard of embodiment resided with the non-deteriorative geometry of the theoretical construct, namely, the monad. In a practice prophetic of modernism, the ordinance of architecture is embodied in the realization of geometry, rather than its situational appearance. The implication, in a reversal of representational priorities, is that the traditional gap between geometry and realization had been falsely narrowed. Allegory and monad consumed worldly matter and digested it into text. The apogee of this process, remains to this day in the triumph of modern technology.

It is all too easy to identify the culture of the Baroque as the culprit, responsible for the modern malaise of technocracy. But its evidence is, after all, telling of a threshold of representational thought. Traditionally, the world was the projection of an ideal (an origin) into the dispersed shadow of the present. But with the Baroque, the receipt of projection, and its interpretation, gradually ceded to an inverted condition where the seminal projection was focused outward from the present. In itself, the speculative practice was such a projection. With Kircher, it was the articulation of the vibrant imagination into realms beyond what is commonly agreed on as the lived world. Such is the case in his *Iter Exstaticum Kircherianum*.

The most consequential aspect of this projected condition, however, is in its effect on history, or to be more precise, the invention of a future. While the objectification of the past denigrated the origin to a chronological end, the future was equally objectified as a cultural goal. Posited at the furthest extremity of time, emancipation grounded itself within the aspirations of available prophesy. Time became a potential end that could one day be reached with progress. Progressive time became the extremity of human labour, and hence, subverted the risk of transgressing the limits. Certainly attainable, but cruelly out of reach.

Generations were to be perpetuated by the continual renovation of their prototypic models. Within the conviction of its authentic influence in years to come, each iteration within the stream of lineage was claimed as an original vision of an idealized form.

But while the prototype was conceived of as a contemporary construct, its legacy was an appropriation of its attributes throughout history. Like the royal court, it was specifically the intention of the prototype to be exclusive of time. By virtue of that exclusion, it would be immune to the mutative forces of chronological history. The paradox lay with the mortality of the monarch, for as the lineage was a projection of the mortal body, its engine was the *regulation* of chronology. In the truest sense, then, the prototype was inevitably a standard.

Like it or not, as architects we are destined to be adjuncts to the tyrant. This is not necessarily an enslavement, but an inescapable risk of our calling. In many cases, the architect is compliant without even knowing it. For unlike the tyrant, or for that matter the benefactor, the architect's task is ethically valueless relative to these paradigmatic extremes. Hence the traditional architect's realm was dead center of the paradigmatic horizon. In the constant shadow of Babel, the architect was specifically charged with the pursuit of the mortal city - a condition of day to day lived experience. Like the groundkeepers of purgatory, the architect was exclusively obedient to his/her master, whether good/evil, left/right, Nimrod/Noah. That is to say, the architect was outside of ethical decisions. His/Her tasks were strictly devoted to reconciliation of the extremities.

In our explicit exclusion from participation, our present choices are somewhat limited. We are now forced to be conscientious of our compliancy, for there is little balance to reconcile it for us. This, after all, is the modern dilemma. It only accentuates a more urgent need for our understanding. And yet, if at its most distant ends the extremity of Babel is present, then we are still committed to the adversaries of artifice in what we do. Like all other periods, there are moments of reconciliation that still seem to shine through.

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Appendix to Inseminate Architecture:

An Archontological Reading of
Athanasius Kircher's *Turris Babel*

Athanasius Kircher.

Turris Babel.

A partial translation by Dr. Faith Wallace

With assistance by Patrick H Harrop

Osler Library

McGill University

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An appendix to a thesis submitted to the Faculty of Graduate Studies and
Research in partial fulfillment of the requirements for the degree of Master of
Architecture

Patrick H. Harrop

McGill University, School of Architecture.

Montréal

© Patrick H Harrop August, 30, 1992



P. ATHANASIVS KIRCHERVS FVLDENSIS

è Societ: Iesu Anno ætatis LIII.

Honoris et observantia ergo sculpsit et DD C. Bloemaert Romæ 2 May A. 1655

ATHANASIUS KIRCHER, s.j.

**THE TOWER OF BABEL
or
THE ARCHONTOLOGY**

**in which
are described and explained
with much erudition
firstly
the way of life, habits and artifacts of the first men who lived
after the Flood, and the greatness of their deeds,**

**and secondly
the building of the Tower, the construction of cities,
the confusion of languages, and
of the transmigration of races
that ensued, together with the history
of the major dialects derived therefrom.**

**Under the patronage of the most august and wise Emperor
LEOPOLD THE FIRST**

**Amsterdam
At the Jansson-Waesberg Press, 1679
with [imperial] privilege.**

**Joannes Paulus Oliva
Prior General
of the Society of Jesus.**

Since the theologians of the Society have examined a certain work entitled The Tower of Babel, written by Father Athanasius Kircher, a priest of our Society, and since they give their consent that it may be published, we authorize that it be set in type, if it appears so to those to whom [such a decision] pertains. Given at Rome February 10, 1672

Let it be printed

Brother Hyacinth, Libell Sacr Palat Apostol Magist

4

**FOR THE MOST HOLY
LEOPOLD I
EVER AUGUST EMPEROR,
JUST, PIOUS AND HAPPY,
KING OF BOHEMIA, HUNGARY AND ROME,
THRICE GREAT,
Athanasius Kircher
prays eternal felicity**

After the calamitous catastrophe of the Flood and the Ark of Noah, after the tragic demise of the human race, after the woeful spectacle of the obliteration of the earth and its contents, in the manner of a new state of the succeeding age, and against a background of extraordinary scenery, I introduce upon the stage the Tower of Babel -- a Tower, I say, erected by the first world-tyrant Nimrod, son of Ham and Chus, on the plain of Shinar where the whole of humankind was living at that time. This Tower was famous -- or perhaps I should say, infamous -- throughout all the ages in this regard, namely that the brash daring of human impiety attempted with foolish presumption to make it reach to the farthest frontiers of the heavens. I call it a building which the crime of *lese majeste* against God, when it had arrogantly reared itself up to an undeserved pinnacle of human affairs, demolished when a lightening-bolt of heavenly vengeance fell headlong upon its conceit. And just as it proved by the conspicuous warning of its overthrow both the supreme dominion of the divine power and the truth of that Spirit which is everywhere to be held in awe, so also by the blatant example of its grievous fall it taught -- and ought to teach, every age of the human race which was to follow after, that there is no counsel against God; rather, all the machines of the arrogant spirit, all the foundations of ambition, no matter how great they are, are nonetheless vanity and madness, and are destined to perish by the same fate. For what could be a clearer example for ages to come of vanity and worldly stupidity that could curb the impulse to foolish grandeur and overthrow the fatuous imaginations of men, than such an arrogant and oversized conceit crushed by the merest touch of the finger of God, a pile so vast brought low so swiftly and with such ease? Here do I introduce upon the stage that unhappy and ill-omened example of stubborn arrogance, and would that I might present it before the eyes of all that they might see how, in this theatre of ambition, the play always ends in a tragic catastrophe, and that they may perceive that no other epilogue is to be expected to the work which impiety creates than a heap and mound which will bury the man who devises such nefarious monstrosities in the very same ruin. I would not have thought it possible to hide from anyone with a mind capable of perception, and who would give particular consideration to what I have endeavored to place before his eyes, how great was the harvest of calamities sown for the whole of human posterity by these Babylonians -- insane prevaricators, who being forced by Heaven to desist from proceeding any further with the monstrosity they had begun, and being divided and scattered by the marvellous confusion of languages, luckless perpetrators of the transmigration of nations and peoples, propagated like shoots throughout the whole world -- how great (I say) a harvest which these seeds of infelicity, scattered hither and yon, disseminated. For Nimrod, exciting in such a great multitude of mortals to a frenzy of ambition (for he struck awe in them by the gigantic fame of his body) and trusting in the greatness of his physical as well as of his [political] powers, having rejected the worship of his ancestral religion and departed from the paternal commandments of Noah, whom God had instituted as first monarch of the new age, degenerate and refractory, when he made a bid in his impious conceit for the title of divine apotheosis, spurning and

kicking aside divine and human law, was the first to pollute the world, only recently purged by the Flood from the muck of crime, with the stain of abominable tyranny, idolatry, and the many dispicable plagues that result therefrom. Learning of this impiety, and smitten with sorrow in his inmost heart, Noah, the restorer of the human race, after the sons of Shem and Japeth had been separated by the will of God from the impious line of Ham, did not cease to restore by whatever means he could, through the propagation of the worship of God, the true way which Nimrod had corrupted. Would that we might teach thereby that there is no mightier battering-ram for overturning empires and kingdoms than impiety, and no greater defence for preserving and fortifying them than piety and religion. Wherefore I have drawn, to be exhibited by the lineaments of this volume composed by myself, a picture of this two-fold primeval empire, a prototype, as it were, of all the others, so that the kings of the earth and rulers of the world might contemplate, as if they were gazing attentively into a mirror, what is worthy of the scepter and purple, and what is unworthy, what is in harmony with right reason, and what is out of harmony with it, what therefore fits the norm of the divine Moderator, and conforms to it, and what is deformed from it. To none more appropriately than to yourself, SACRED IMPEROR, who hold the stern and tiller of the Christian commonwealth, do I reverently lay this aforesaid work at your sacred feet, with all the assiduous service of a submissive will of which I am capable. Vouchsafe, most august Emperor, for the sake of your piety and clemency towards all men, that the meagre fruits of my labours may repose at your feet like attendants shackled to your lowliest service, under the protection of whose giant shadow rest the Peace and Happiness of all, in the watch-tower of whose august head those tireless sentinels, Counsel and Industry, keep watch. These two eagle eyes of your perspicacious mind never divert their gaze from the rays of the eternal Sun by the slightest relaxation of their exertion, but they are assiduously occupied at every hand with zealous application on behalf of God and the people. Peace and Justice, the premier portion of your patrimony, have taken their seat on the unshakable throne of your incomparable soul. The whole world recognizes and admires how exactly, how prudently your mind which is not only capable of containing such a mass (which Tiberius declared to be very rare) but even exceeds it in size, has conformed the administration of the Empire committed to it to the norm of Noah, its archetype, and with what great faith and wisdom it has steered this ship amidst so many billows and tempests. What man, brought up to take shelter in the crowded lairs of wild beasts or in the inner vastness of inaccessible mountains, does not know of your virtue and of the nefarious counsel of others, and of the hitherto unheard-of perils by which your sacrosanct head, and with it the life of the entire house of Austria, was threatened with the greatest evil? What place could be so far sundered from our world by intervening lands and seas that the fame of our name and the sweet fragrance of your piety has not reached it? What corner of the world is so alienated from all humanity, what nation so uncivilized, that it does not shudder at the unnatural prodigies of abominable devices by which your security was endangered, and ours as well, and indeed that of all good men of whom you are the life and salvation? O the disgrace of these times and customs! O the hellish ferment of our foul age! O suppurating tumors of the ulcerated world, portents of a world on the brink of exhaustion, plagues of the human race, infernal vipers, detestable Catalines of the empire! These men, either drunk on the potion of blind ambition or deranged by the frenzy of a haughty mind, in order to construct in the airy spaces of vacuous imagination their own tower of Babel, that is, of confusion, by mingling high with low, sacred with profane in a savage criminal act, and set up for themselves a throne with no foundation, would overthrow the throne set up by

God. They supposed they would be able to achieve this by a counsel not better, but worse (I say), as if they would utterly overturn, with the secret techniques of their devices, that sacred edifice of empire destined by divine Providence for yourself, and borne with great majesty upon the shoulders of the Atlases of Austria down through the ages -- and cobble together a new one for themselves out of its ruins. They appeared like new Caligulas resurrected from hell, who, the more abundantly to gratify his cruel thirst, wished that the Roman people might have but one neck so that the head of the world, lopped off by a single blow, but lie low upon the earth. Thus did these henchmen of fury, more repulsive by far, shake their deadly weapons of treachery and envy, weapons dipped in every pus of crime and venom and tipped with the frenzy of delirium, against your sacred head -- the head, that is, of Christendom -- in a huge battle of the giants. They did this in order that by their abominable temerity they might snap the strand of your most august house, hitherto kept safe by divine bounty, and tear up by its roots the sacrosanct shoot by sacrilegiously murdering you. But by an intellectual outcome, which they certainly were anticipating, these apes of Babylonian impiety strove to overthrow that throne so solidly founded upon a eucharistic base by the incomparable Rudolph, prototype of princes, and continuously stabilized in the cultivation of piety and of every virtue by so many august heirs, which throne they believe to have been destined by a divine oracle to be the ultimate consolation of the aging world. For all the criminal hatred with which your enemies plotted against your life, there was the zeal of all those good men who live in you keeping vigil, pious prayers emanating, and ardent desires burning for your safety. However much these portentous architects of mischief exerted themselves to overthrow the public good by slaying you, by so much did the cares of these men of heavenly piety exert themselves with all their might to establish your security, or rather our security, which reposes upon you. So vain are all the engines contrived in opposition to the counsel of Almighty God, whether by the the insane presumption of an inflated and raging spirit, or by the clandestine channels of conspiracy.

End of translation.

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BOOK I

Preface to the Reader

After the Flood, humanity spent 100 years reproducing itself before building commenced on the Tower of Babel and the City of Babylon. Moses describes these events with extreme brevity in the 11th chapter of Genesis. AK proposes to expand this narrative on 5 points:

1. How did Noah and his sons live after the Flood, what did they do, and what inspired them to migrate?
2. What impelled them to build the Tower?
3. How high was the Tower expected to be?
4. What did they expect to accomplish in erecting the Tower?
5. How was this project, displeasing to God, abandoned? How were the peoples, baffled by the confusion of languages, scattered throughout the world?

Chapter 1. The departure of Noah and his sons from the Ark.

After leaving the ark, Noah and his sons spent a number of years in the mountains. As the geography of even the Alps and Appenines demonstrates, mountain ranges often have upland pastures upon which cattle can graze. AK thinks that Noah and his sons lived on pastures such as these. This would have been the best choice for Noah to make, because springs of water free of mud would have appeared here sooner than on the plains, making fields suitable for agriculture. By divine illumination, Noah understood the condition of the world, and how much it had changed. He also knew how long he would have to remain upon the mountain until the lower regions could be inhabited.

Chapter 2. How Noah and his sons, together with their wives, occupied themselves in the mountains.

Noah was not idle during this period, but much occupied in organizing the provisioning of his family so that they could survive to fulfill God's command to "increase and multiply." Just as he had organized the economy of the ark by divine inspiration (AK refers reader to his Arca Noe for details), so also he provided for the necessities of life after the exit from the ark. He taught his sons metal-working. They made tools such as ploughshares and sickles, not from ore mined from the mountains (for as yet they could not do this) but from metal objects transported with them in the ark. They also practiced pottery. Noah also taught them to construct cottages and huts, after the fashion of those he had seen before the Flood. Agriculture was begun, using seeds brought in the ark. It is inconceivable how they would have survived otherwise, for it would have taken years for the mud-covered earth to produce crops spontaneously, to say nothing of trees and vines. Noah also instructed the women in their special tasks: making cloths, flax cultivation, dyeing, spinning, weaving etc., as well as the raising of poultry and eggs. Thus did Noah instruct his children, and each generation passed on his teaching to the next.

Chapter 3. The descent effected by Noah, with his large family, from the mountain to the plain in the foothills. Noah's exhortation to his three sons, Shem, Ham and Japeth, who now were made the leaders of the peoples

Eventually Noah saw that the regions of the plains had dried out. He descended from the mountain and found a plain -- the present Persia or Armenia -- well watered, with pastures, groves and orchards, and generously provided with building materials. To prevent the migration of such a host from resulting in chaos, Noah, "the King and father of them all", divided the people the people into three clans according to their descent from Shem, Ham and Japeth, so that he might rule with plenitude of power over them all, and so that they might have recourse to him, as the heir and judge of the whole world, in the event of difficulties or dissensions. Noah's first priority was the care of their souls. He began by prescribing rules of life and discipline, teaching them the practice of religion, and instilling in them both moral standards and a sentiment of trust and devotion towards God. He instituted sacrifices and seasons of special observance, for he knew that such a great multitude of people could not be governed without God's assistance. Then we can imagine him calling the tribes together and exhorting them as follows: "My sons, I have summoned you today to a solemn meeting, in the name of God, the holy and glorious. Pay attention to what I say, take in with your ears the words of my mouth, the words of truth, the words of life, the words of salvation. If you keep them, you will always have God's favour, if not, do not doubt but that the just judgment of God will come down upon you and your descendents. You are aware of what an unhappy state the world was in before the Flood. Together with me, you saw the brutality of the giants before the Flood, and the unspeakable perversity of men in every kind of wickedness and misdeed, which, overstepping the limits of nature, attained to this impiety from the sacrifice of the line of Seth in conjunction with that of Cain (?)". The result was that God himself, whose very nature is goodness, decided to destroy the world and exterminate everything in a flood. You will remember how I, albeit I am but his worthless servant, was chosen out as someone unique in that I followed the straight ways of God with fear and trembling, and avoided any participation in wrong-doing. God destined me to carry out the command of his divine justice against the impious, and commanded me in his infinite mercy, and by his very words, to build an ark, in which it was his will to preserve you, my sons, together with your wives, chosen from amongst the mass of humanity. You know with what faith and piety I sweated for a hundred years on the building of the ark, what insults and harassment I put up with from the rascally giants, until such time as disaster overwhelmed them in their rock-like stubbornness. You remember, my sons, how, shut up inside the ark with representatives of every living species, we were sustained by the beneficence of God, father-like, he preserved us while the whole world perished, and assisted us with his ineffable providence. You remember how he instructed me in my difficulties by the oracle by the oracle of his divine voice, and how, when the human race had been extinguished, he destined us eight men to rise up as the seed and renovation of the world. These are things the likes of which have not been seen since the beginning of the world, nor shall be seen in future ages, thus we ought to cherish the benefits we have received from the ineffable goodness and mercy of God in our hearts, and ruminate upon them perpetually in earnest meditation.

Let us turn now to the many and great benefits which Almighty God has bestowed upon us since we have come out of the ark, for apart from you and me and your wives, there is not another man to be found upon the whole face of the earth. Think and reflect upon how He has made me the sole heir and lord of the

world, and placed the earth in all its fullness under my power, and deigned to promote me to govern all the realms of the new-born world, and its peoples. Therefore, you recall that for the sake of such immense benefits I instituted by way of thanksgiving a solemn sacrifice to Him who loved us so. Lest your progeny, which has increased to such great numbers, give rise to confusion, I have elected to divide you into tribes. Let Shem, my first-born, whom by the mercy of God I engendered one hundred years before the Flood, have the care of his descendents, sons and nephews. Let Japheth likewise be prince and lord over his progeny. Let Ham also wield dominion over his clan. I insist upon this, that you not abuse your power by mixing together by spurious marriages, but that each one govern his own clan with paternal and not tyrannical administration. Since neither kingdoms nor their rulers can long subsist without the aid of God, I command that above all else you hold to that religion, which from the one, true living God, creator of the world and ruler of all things, Seth, son of Adam, taught our fathers from the beginning of the world, and which by unbroken tradition has come down to me, who am the tenth in line from Adam. As adjure you to preserve this religion, and write it upon the inmost tablets of your heart, lest any of it be lost to memory, for I want you to know that all your actions and your felicity depend upon it. Since in His infinite wisdom and goodness he desired that we alone should survive when the whole world perished, you should know that it was done for this end, that you should not only cultivate this religion which I have prescribed for you with all the fervor of your heart, but also pass it on with the greatest care to your sons, and to the descendents of your descendents. Take care, my dearest sons, that you never at any time neglect the worship of God, the prayers and sacrifices, for nothing is more pleasing or acceptable to God. Do as you saw me do when we came out of the ark, at the appointed time, with the same ardor, and banishing every superstitious practice. Preserve, cultivate, and love peace and concord amongst yourselves, as the true and unique pledge of your felicity. If you do these things, the most benign God will enrich you yourselves, and all you undertake, with a long and blessed life, He will give you rain in due season to fructify your fields. Your barns will be filled with an abundance of grain and fruits, and your stores of wine and oil will overflow with abundance, and you will abound in the possession of every good. But if (may it never happen!) you do not obey my precepts, but rebel against God by the impulse of a perverse mind and the enormity of wicked deeds, you may know for certain that He will take His revenge upon you for your pertinacity of mind and riotous licence of sin, with thousands of calamities, for just as the divine nature of goodness and mercy knows no end, so neither does divine justice. Inscribe this upon your bosom, and should any of these things befall you, remember that I foretold them to you. Live in happiness, remember my words, may the blessing of God come down upon you, and may He bring to pass what I have thought might be accomplished through you.

Chapter 4. The multiplication of the human race from the time of the Flood up until the construction of the Tower.

The 9th chapter of Genesis shows that the human race was propagated over the earth by the three sons of Noah, Shem, Ham and Japheth. The text says "These are the sons of Noah, and from these the entire human race was disseminated over the whole earth", and in chapter 10, "These are the families of the sons of Noah according to their peoples and nations, from these the nations were divided upon the earth after the Flood." In this chapter Moses intends to demonstrate that just as the whole human race descended from Adam at the beginning of the world until the time of the Flood, a period of 1656 years, so also after the Flood,

as at the beginning of a new world, the whole earth was filled with inhabitants and cultivators from the sons of Noah. Now although Moses describes the descendants of Noah in detail, it is plain to anyone that he has not enumerated the entire descent. Moses has in fact only named the chief men of Noah's line, and set the others aside, lest he waste a lot of time on a topic which is irrelevant to this theme. I have dealt with this at length in Arca Noe, to which I refer the reader.

Not surprisingly, historians have marvelled how the sons of Noah could produce such an immense multiplication of humanity in such a brief space of time, that is 275 years until the Tower of Babel, to which even the pagan writers Herodotus and Diodorus bear witness. One ceases to marvel when one has investigated an account of human generation. Who does not know that Nimrod alone, the builder of the Tower, led 200,000 armed men of his own clan alone into the field, leaving behind the women and children, Diodorus tells this of Belus, who is the same as Nimrod. Who would not be astonished that Nimrus, son of Nimrod (as Eustachius of Thessalonica states in his commentary on Dionysius of Alexandria's *De situ urbis*) summoned 140,000 workmen to build the city of Nineveh, and this within 295 years of the Flood, if after 340 years whether for waging wars or building cities, could be propagated, although almost the whole earth was inhabited by then? If we posit that each generation takes thirty years, 80,000 souls could easily be born. But so that the reader can see it more readily, we will work it out by arithmetical demonstration.

Chapter 5. The first transmigration of the sons of Noah from Mount Ararat to the flatter fields in the foothills.

1. The language or dialect which was first used after the Flood

Before proceeding any further, we would first discuss the text of Scripture, so that we might conform our doctrine to its design. For this is what Moses says [Hebrew text], that is 'The earth was of one lip, and of the same speech, and when they came forth out of the east, they discovered a plain in the land of Shinar, and they made their habitation there.' The Greek text says [Greek text], that is, 'The whole earth was one lip, and one voice, and it came to pass, when they had moved away from the regions of the east, that they discovered a plain in the land of Shinar, and they made their habitation there.' The Chaldaean reading has it as follows [Chaldaean text] that is, 'And the whole earth was of one tongue and one expression, and it came to pass that when they had emerged from the beginning, they discovered a plain in the land of Babel, and they made their habitation there.' The Arabic version has it thus [Arabic text] that is, 'For the whole word was one as to language, and of the same expression, and when they were tranquil in the east they discovered a plain in the land of Baghdad, that is in Babylon, and they settled there.' The Syriac text agrees with this.

Thus the earth was of one lip and of identical vocabulary, or as the Greek has it, "erat terra labium unum, et vox omnibus eadem", or the Chaldaean, "omnis terra lingua una, et locutio eadem", or again the Arabic, "erat totus mundus idioma unum et loquela una." What indeed is meant by 'lip' (*labium*), we will now explain.

Since the lip is an instrument for forming sounds, no sound can be produced without the lips. Since no one can speak without opening and moving his lips, the sacred text rightly and correctly uses 'lip' for 'tongue', as the cause for the effect "In the whole earth", or as the Arabic has it, 'in the whole world' (using

world (for the sum total of humanity) there was one tongue, that is all the people who after the Flood and up to the transmigration had grown into an immense multitude, spoke one tongue

So we might ask, first of all, what tongue was it? I reply that it was the holy and primordial tongue Noah and his sons learned from the unbroken tradition of the Patriarches before the Flood, and which they taught thereafter to their sons, since there was no other [language] in the world. Anyone who doubts this will readily be seen to be out of his wits. Should anyone doubt whether this primeval language could be maintained uniform as to tenor and pronunciation over a period of one hundred years, I will resolve his doubts as follows:

This is my reply: daily experience teaches us that no language is pronounced with such perfection by all the people of any given nation so as in no wise to depart from the more refined usage which obtains in princely courts, and this is evident in Italian, German, French, Spanish, Arabic and the like. In Italy it is believed that the purest language of all is Tuscan. Nonetheless, Milanese, Genoese, Bolognese, Venetian, Sammarinese, Apulian and Calabrian differ from this primitive purity; and yet one and the same language is used in Italy which all speak, and the natives understand one another. The same is true of other languages: so that there is scarcely a language to be found in the world which does not suffer corruption, whether from neighboring regions and intercourse with other peoples, or from the genius of particular provinces and the nature of the locality, or from the invention of new words. This is so true that not only in distant provinces, but even in big cities there will be distinctive ways of talking, as the experience of the city of Rome teaches.

So we might ask how we are to understand the sacred text, 'For the whole earth was of one lip.' I reply that there was indeed one tongue common to all, but different manners of pronunciation, which we call dialects. For just as they were divided into three tribes according to the generations of the three sons of Noah, so also the purer language usage survived amongst the princes of the tribes, Shem, Ham and Japheth and the sons and grandsons, while the popular and plebeian language, born of the various mixture of men (as we know happens in every language) declined indeed from the purer usage, but not to the extent that they could not understand one another. What exactly this language was will be explained in the third book.

Now we will proceed to explain the rest of the sacred text:

II. The way of life which these primeval mortals lead for many years in the foothill region of Mount Ararat.

Amongst exegetes a great controversy has arisen concerning the journey of migrations: first from the mountain onto the plain, and then into the land of Shinar. For many cannot grasp how the people can be said to have moved from the east, when Armenia is not to the east, but to the north of Shinar. Indeed, since I find here a not insignificant ignorance of geography amongst these writers, I have thought to unravel this controversy: that the sacred text might be preserved intact.

We declare that in this early period, Ararat designated not a whole region, but only the name of the mountain where Noah and his sons lived after the Flood, and from which he descended into the valleys in order to cultivate the broader

plains when the propagation of mankind had reached immense proportions

The geographers describe two Armenias. Lesser Armenia, and Greater Armenia. Greater Armenia is that which borders on Asia Minor on the west, Georgia or the region of Colchis (also called Iberia and Mecrelia) on the north, and which faces Mesopotamia on the south. Greater Armenia has the Caspian Sea on the north, Lesser Armenia on the west, Persia on the east and on the south, as the attached map shows. Here is where the famous Mount Ararat is located, I have dealt with this at length in *Arca Noe*, to which I refer the reader. To return to our discussion, it remains to explain how the immigrants came to Shinar from the east. In order to do this more cogently, I will begin from the beginning.

The seventh chapter of Genesis says that the Ark landed on Ararat. As we showed above, Noah, when he emerged from the Ark, first cultivated the flatter tracts of the mountains, not settling permanently in one place, but staying here and there as the fertility of the locale and as opportunity presented themselves. You must not think of Ararat as simply a single mountain, for the *Itinerary of Persia and Armenia* describes it as a long chain of mountains extending far and wide towards the east, which mountains the Chaldaean Paraphrase calls [Chaldaean text], that is, the Gordu Mountains. Ptolemy calls them the Gordian Mountains, and situates them as 47°, as you can see from a map. Furthermore, it is the unanimous opinion of the exegetes that Noah, remaining upon these mountains, which extended far and wide, with his sons, cultivated the fields, and taught his sons' sons necessary crafts until after some time, the mountain no longer being able to sustain his copious progeny, he was obliged to descend to the flatter regions of the foothills, and to found a more ample colony in more fruitful fields. This migration took place after many years, so that between the Flood and the Tower of Babel there was a space of 275 years. It is evident that these years were passed partly on the mountains, partly on the broader fields, and partly on the journey to Shinar. We would posit that 20 years were passed on the mountain, 75 in the flatter regions, and that the journey to Shinar, which geographers say is a journey of two months, took five years, for a total of 100 years, which is long before the building of the Tower.

Now I will show how it can be said that they came from the flatter regions of Ararat eastwards onto the plain of Shinar. It is certain that the vast plains at the foot of Mount Ararat into which they entered from the mountain valleys were once very fertile, and today are partly fertile and partly sterile, these plains extend across the north, along the mountain chain, almost up to the Persian Sea. Who does not see that with respect to the land of Shinar, these plains and lands are properly speaking to the east? This is plain enough in the adjoined map. It is evident that Noah, with his progeny, lived in these regions for many years, because he found them apt for agriculture and vine-growing. For as the Arabic text renders 'and it came to pass that when they migrated from the east', it explicitly teaches that they were tranquil in this easterly plain, that is, they stayed there with one accord, and afterwards undertook their migration. Book 2 of Strabo confirms this where it says [Greek text] 'There are many mountains in Armenia and many broad plains in which, however, vines do not readily grow, and many mountain valleys, some of which are mediocre, and others very pleasant.' There is no doubt that Noah stayed with his folk in these regions, afterwards to be called Media, Persia and Bactria, planting vines and teaching his sons the whole craft of agriculture.

Chapter 6. The time of the transmigration from the East into the land of

Shinar from the Flood to the year 132, which is the birth of Phaleg.

EPILOGUE: In which the sequences of the generations of the sons of Noah can be compared.

Chapter 7. Description of the land of Shinar, which the migrants from the East found to be abounding in delights.

Chapter 8. When Nimrod, the architect of the Tower, was born, and how long he lived. (Paraphrased)

The Rabbis speculate that Nimrod is one of the four kings conquered the city of Sodom under the leadership of Amraphael. For it is here that the King of Shinar is identified as King Amraphael.

"In those days King Amraphel of Shinar, King Arioch of Ellasar, King Kedorlaomer of Elam, and King Tidal of Goyim went to war against King Bera of Sodom, King Birsha of Gomorrhah, King Shinab of Admah, King Shemeber of Zeboyim, and the King of Bela, which is Zoar."

Of these four one would be defeated by Abraham at a later time. It is for this reason that Kircher is skeptical, for a more appropriate leader of the Kingdom of Shinar at this time would then be Ninus. Within the chronological forum of the old testament indicates a difference of 122 years between the reign of Nimrod and of Ninus.

Nimrod died in the 65th year of his reign. A minimum of 22 years is understood in the construction of the tower itself. At which he was 42 years of age. At the point of 52 years of age the world chronology was 183 after the flood. Thereby meaning that he lived for 235 years. This means that he was in essence 183 years old when he began to build the tower. The confusion of tongues takes place at year 275.

The greatest surprise is that a project of this magnitude could be built in the 22 years that is specified. One reason for this dramatically shortened time is the fact that the tower was not completed to this extent. This contradiction is further elaborated by the fact that the Ark took a total of 100 years to build. In comparison to this how could Nimrod only spend 22 years to construct a project of an obviously greater magnitude?

Kircher points out that in all probability that the project took longer for 100 years were spent in the planning of the tower, thus it is not absurd to arrive at this figure.

Chapter 9. The spiritual meaning contained in Moses' account of the Tower.

God has provided a ladder by which the human mind, despite its weakness, might ascend from things perceptible by the senses to things which the senses cannot perceive, not only through the system of this corporeal world, which contains the reasons of all things which are known, but also, and much more potently, through his holy scripture, in which just as all the treasures of wisdom and divine knowledge are hidden, so also there is a perpetual analogy of all things, whether sensible or abstracted from sense, wrapped up in various modes

of meaning, and expressed in a fourfold manner: historical, tropological, allegorical, and anagogical. Under their guidance we are lead to the secret sacraments of the divine writings, that is, from visible to invisible things, just as the Apostle says: "For the invisible things of Him are revealed to the mind through the created world, through the things which are made." That is, the divine wisdom adapted the invisible worlds and the insensible powers of things to the corporeal world and its contents, so that whatsoever mortal thing in this corporeal world comes into human view, is expressed by God in a supremely wise and much more excellent manner in the invisible and intelligible worlds. Who does not see that in Holy Scripture there are as many mysteries as there are words and punctuation marks, and that every phrase signals a mystic meaning [*sacramentum*]. But indeed, as we have discussed this more fully in our *Arx analogica*, we refer the reader to this book. Now that we have finished explaining the Ark of Noah according to its historical and mystical meaning, nothing remains but that we should proceed in the same course to the mystical meanings which occur in Moses' account of the Tower of Babel. First we shall expound the following text: "When they came out of the east, they found a plain in the land of Shinar, and they made their habitation there." St. Gregory I, in his *Moralia in Job*, fits these words of the sacred text to their tropological and mystical meaning in a very elegant manner. He conveys many admonitions and facts which are useful to discipline and to the spiritual life. He teaches that those who have abandoned the zeal and desire for heavenly things and given themselves wholly over to the love and pursuit of worldly goods, thinking the highest good to reside in the pleasures of this life, are like the men who, coming out of the East and entering into the land of Shinar, struggled to build a very high Tower with mud and pitch. I present these words of St. Gregory from his commentary on the fourth Penitential Psalm. Expounding on the penultimate verse of the Psalm: "May the Lord give his blessing to Zion, and build the walls of Jerusalem", he writes as follows: "Each and every man is either a citizen of Jerusalem or a citizen of Babylon, for just as the holy man becomes a citizen of Jerusalem through his love for God, so the wicked man, for love of this world, labours on the construction of Babylon. For in the construction of the edifice of the spiritual Babylon, the perverse follow the example of ancient Babel. As Scripture says, those who created this city had bricks instead of stone, and pitch instead of cement. We can understand by this that those who love the world are constructing a city of this fleshly life, which may swiftly and by a simple blow be sapped from beneath by the power of the winds and the force of the waves. We read that these men came from the East and inhabited the plain of Shinar, and yet a certain prophet calls Christ "the East", saying: "Behold a man with the name of East." It is fitting that those who withdraw from Christ by living evil lives are said to 'come from the East'. Shinar means "breaking of teeth", or their stench. Therefore they dwelt in the plain of Shinar who, place not on the heights of virtue but in the flatlands of vice, shred their neighbors with the bites of denigration, and making their bed in the wallow of a slothful life, exhale the stench of their evil reputation all about. God broke their teeth when he brought confusion simultaneously upon their words and their deeds, for of him it is written, "You have smashed their teeth", and again, "The Lord shall smash their teeth in their mouth." Another prophet has written of their stench, "The beasts of burden rot in their filth." For the beasts of burden to rot is for carnal men to finish their life in the stink of lust. So it is fitting that those who dwell in Shinar built their city from bricks, for those who devote themselves to the pleasures of the flesh erect from frail matter a changed mind. But those who renounce the sinful delights of the carnal life through the work of holiness build up within themselves the sanctification of the virtues. These in truth change bricks into

stones, who can say with Isaiah, "The broke the bricks, but we built with dressed stones." Breaking the bricks, he builds indeed with dressed stones who chastises the lascivious desire of the flesh with the rigor of strict discipline, who overcomes the law of his members with the law of the mind, who rouses the fortitude of the body to the manly strength of the spirit, as if changing bricks into the stones with which the walls of Jerusalem are built." So much for Gregory.

Philo interprets the above mentioned verse as follows. "Notice," he says, "that they came into the plain in which they stayed, but that they found the plain, that is, it was sought out by them in a greedy and inquisitive way, and it matched their madness completely. That is how it goes. The fool does not receive evil, but finds it himself by seeking it out for himself, not content with those things with destitute nature inflicts, but adding to her woes by art and effort. Would that having stayed there a little while, he had passed on to another place, however, he delighted to live there. For Scripture says that having found the plain, they made their habitation there, as if it were their native land, and not at all as if they were denizens of a foreign land. The evil would be somewhat less if, after they had fallen into sin, they had lived there as strangers and pilgrims, and not like kindred and native-born folk. For as pilgrims they might have departed, but having once chosen their residences, they stayed on afterwards, having fallen into every kind of vice by keeping company with wicked men. But the wise know that they are not native-born in this world, but pilgrims, and they remember that heaven is their city and their native land.

Indeed, these men of old, not content with good land, but puffed up with ambition, hoped that they might win an immortal name in time to come through the insane building of this Tower, but they left behind to their posterity an evil reputation and an enterprise of stupid minds, when divine vengeance descended in the confusion of tongues."

But let us listen to St. John Chrysostom as he treats of other things, but equally skilfully. For when he expounds the words, "And let us make for ourselves a name," he says, "Behold the root of evil: that our memory might last forever, they say, so that our age might be remembered in the future, let us, since we are gathered together here, make such a work that will never fall into oblivion. Many are the men who imitate them, and desire to win celebrity for works of this kind. Some build splendid houses, baths, porches, arcades, and should you ask them why they go to so much trouble and expense, they merely answer that they want to leave an immortal memory and a famous name. But by these things they prepare for themselves not so much praise, as blame, for those who look upon these works speak of them disdainfully. This building, they say, belonged to this miser, this bandit, this spoliator of widows and orphans. So this is not to win remembrance, but to be confronted with everlasting crimes, and to be defamed after one's death, and to provoke the tongues of onlookers to accusation and cursing. For the name and memory of a man who makes and possesses a work of this kind cannot last for long. He owns it now, but later it passes from him to another, and from that other to yet another. Today, indeed, it is called his house, tomorrow it is called another's. Thus we ourselves are deceived when we imagine our ownership almost perpetual, when we are forced willy-nilly to relinquish the use of what we enjoyed to other, and not necessarily to those we at least love, but even to those we hate.

If therefore you love eternal memory, I myself will show you the way to make yourself famous for all time, and which will even give you confidence in the age to come. Bestow your generosity and largesse of alms upon the poor, having given up villas, baths and other buildings, and such like mute and inanimate things. Generous alms-giving bestows an immortal memory upon a man, as it is written. He distributed, he gave to the poor, his justice abides for all

time. In a single day he distributed his riches, but the memory of his justice, that is, of his generosity and mercy, will remain for ever. And again it is written: the just man will be held in eternal remembrance, and he will not fear evil rumor. Rightly shall he not fear evil rumor. For as the wicked are spoken ill of amongst men, and torn by the vituperation and hatred of all, so on the other hand the good are celebrated in the speech of all. What a merciful man, they say, how benign, how gentle, how tender, how worthy of immortality, whose wealth, having been distributed, does not serve him, but rather is joined together, adorns, shields and grows into an eternal tabernacle. Thus far, St. John Chrysostom.

At present one can see in Rome the mindless heaps of the buildings erected by the men of old, which if you make inquiry, you will not find, and if you find, you will see nothing but half-buried corpses. These men thought to pile up for extrusions which would last forever. In fact, barely 1600 years have passed, and not a trace of them remains. They piled up towers whose summits touched the heavens, but whether impeded by confusion of mind or forestalled by death, or agitated by the tumults of war, they could not finish what they set out to do. For the evil fate of mortal men turns the wheel of change, so that nothing is stable, firm and solid. So many huge palaces and gardens, piled high with every kind of delight, have we seen, whose creators we do not know. And just as they go from ownership to different ownership, so also, little by little, everything is obliterated in oblivion, so that not a hundred years goes by but that the villas and palaces have lost the memory of him to whom they had originally belonged. These men are similar to Nimrod's builders, who swollen with pride hoped the glory of their name would survive, and in the place of the glory of eternal felicity, suffered shipwreck (⁷). We learn all these things from that most wise of men, Solomon, who evaluates very accurately the vanity of mortal works. "I made great works, I built houses and planted vineyards for myself, I made myself gardens and parks, and planted them with all kind of fruit trees. I made myself pools from which to water the forest of growing trees. I also gathered for myself silver and gold and the treasure of kings and the delights of the sons of men, and this I thought my portion, if I might make use of my labour. And when I considered all these things which my hands had done, and labours on which I had sweated in vain. I saw that all was vanity and vexation of spirit, and that there was nothing which abides beneath the sun." If those who envy these buildings desire to obtain eternal glory, let them labour to erect churches to the honor of God, to construct alms-houses to receive the poor, to build colleges when youth may be instructed in virtue and the exercise of good arts. For these are the towers built not by Nimrod, but by pious minds, whose roofs reach up to heaven, that is, which prepare a ladder for those who seek the pinnacle of eternal happiness, beyond which nothing remains. But now let us continue our discussion.

Philo, most astute of the Jews, thought that these men who hoped that they win celebrity with posterity by building the tower, were the type and image of those who publicize their own vices, and wish to be thought noble because of their crimes.

End of Translation

BOOK II

Preface

SECTION I. The building of the Tower.

Chapter 1: The occupation and activities of the first men, after their entry into the land of Shinar.

It seems unlikely that the sons of Noah began to construct the Tower and the city immediately after their arrival in the land of Shinar. As Holy Scripture says in Genesis 11:2 [Hebrew text] "When they had come out of the east, they found a plain in the land of Shinar, and they made their dwelling there." The phrase "made their dwelling there" suggests that they spent a long time in the land, as does the Greek version [Greek text] "after building houses, they made their dwelling there." Chronology corroborates this: had they begun to construct the Tower right away, there would have elapsed between the 132nd year after the birth of Peleg and the confusion of tongues only about 20 years (assuming that it would have taken about that long to build the Tower). From the point of view of sacred chronology this is absurd, as we pointed out above, the best authorities situate the confusion of tongues 275 years after the Flood.

Well might we ask, to begin with, what they did during that period of 123 years in the land of Shinar? with what things, what fields of knowledge, what arts were they occupied? And although Holy Scripture says nothing on this point, reason dictates that this great congregation of men was at that time governed in a most orderly manner by Noah, the leader and King of all. I will prove it as follows:

There is no doubt at all that, as I showed in the first book, Noah moved out of the east together with his sons and grandsons, and that he presided over the whole human race, who revered him as their sole father, and their wise leader and commander, both for his great age and for the fortitude of spirit in overcoming difficulties. Seeing that they had grown into such a great multitude, he encouraged them to migrate and to colonize the entire world, that they might fulfil the commandment of God to "increase and multiply, and fill the whole earth." Josephus describes this in his Antiquities of the Jews.

So that this migration might be successfully accomplished, it seems highly plausible that in the meanwhile this wisest of men should prescribe a political structure for the heads of the families, and a mode of governing the regions into which they would enter according to the laws of justice.

[Noah also instructed mankind in all the mechanical arts. Indeed, the outstanding size and splendor of Babylon and its gardens and palaces is directly due to Noah, who learned the arts by divine inspiration, and passed them on to his progeny. There seems to have been a much greater quantity of gold in these ancient times, mined naturally from the earth, and not fabricated by alchemy. It is Noah's instruction which is responsible for this.]

Chapter 2. Whether Noah was present at the construction of the Tower; together with Nimrod's exhortation to the sons of Ham to undertake this work.

Many interpreters think it unlikely that Noah would have been present at such an impious and arrogant enterprise, but that when he saw what Nimrod was

building, he withdrew to a neighboring region of Mesopotamia with his sons Ham and Japheth, so that he should not see the conclusion of the foolhardy pile which the sons of Ham were building. At that time, the tribe of Ham was united, and in their midst arose Nimrod, grandson of Ham and the sixth son of Chus, huge in stature beyond all others, and famous on the lips of all. He was endowed with marvellous eloquence, and full of fox-like craftiness and cleverness. He lacked nothing to dare the highest things, neither strength of body, nor perspicacity of mind, nor an ambitious spirit of dominion. Hence, as he was of a haughty spirit, he did nothing but deter them, against Noah's plan from proceeding with the transmigration they had begun by displaying before his clan the model of the construction he had conceived. But before proceeding to the construction of our Tower, let us first set forth the text of Holy Scripture, for from this we may readily grasp Nimrod's intention. The words which follow are from Genesis, ch 11, verses 3-4 [Hebrew text], that is, "And each said to his neighbor: 'come, let us make bricks, and bake them in fire, and they had bricks for stone, and pitch for cement (other readings say, 'for mortar'), and they said, come, let us build for ourselves a city and a tower, whose pinnacle shall reach to heaven, and let us make for ourselves a name, before we are divided over the face of the earth." From these words we gather that each persuaded the other to present a certain model of the tower, but that no one [model] could prevail without a chief, so that Nimrod, who by his astuteness and at the same time from the natural eloquence innate in him, did not, I say, provoke them to this, but rather bewitched them with his wondrous and wicked words. As Genesis 10, verses 8-10 says, [Hebrew text] "And Chus begat Nimrod, and he began to be great in the land (or as the Greek reading has it, he was a famous giant in the land), and the beginning of his reign was Babel and Arach and Chalne in the land of Shinar." He being instructed, therefore, in these arms, we ought not to think implausible that there was a speech of this tenor to these sons of his paternal family of Ham and Chus and the other grandsons of the family, already separated from the families of Shem and Japheth, for the sake of the high authority by which he held sway, and although it is not contained in holy Scripture, nonetheless by the testimony of Josephus, we are induced to give credit to the exhortation made to his people in approximately this way, for we are permitted to conjecture, on the grounds of human feeling, that it took place. The exhortation follows.

The exhortation of Nimrod, pronounced before the leaders of his people, exhorting the commencement of construction of the Tower and the City

If I am not mistaken, you know, O noble seed of the high-born family of the re-born world, that we were constituted to be princes over the whole earth, divided into three tribes, by our progenitor Noah, so that whichever should arrive first in any region should subject it to its rule. When therefore from the regions of the east into the foothill plains of Ararat, stretching far and wide, in a journey almost a century long, living together in unanimity, we yet came from the eastern field of that aforesaid region by long wanderings over the earth, into the land which you see, and now by an unbelievable propagation of the human race, which you see, we have grown daily into such an increase, so that it can scarcely be possible for us to establish ourselves here to any greater extent, and to live together as one. I, from my own person, impelled by esteem conceive for you (?), in this noble gathering of elders and relatives, whom I revere, look up to and venerate as princes and heirs of the whole world with the very utmost obedience of will, have elected to manifest my mind to you this very day. A great and fiercely blazing deed is stirring, so that I think to unfold with mature deliberation a plan which otherwise could not proceed save to the very great prejudice of our

family

You know that Noah, the ancestor of us all, stirs up counsels exceedingly contrary to our plans [customs?], and at the same time does nothing but urge us to migrate from this place of congregated peoples, and persuade and forcefully provoke by all his wile to do his will. Already by an act of I know not what provocation, he has not blushed to separate the progeny of his sons Shem, Ham and Japheth from our tribe of Ham, as if it were cursed. This transmigration, indeed -- and this seems all the more intolerable to me -- he does not cease to force upon us with threats of arms, so that I would rightly bring down misfortune if I were to obey his violent will. So let the tribe of Ham act with wisdom, nay, with strength and in great numbers, lest you permit an old man to tie you down like boys, lest he deter you with alluring words by which he attempts to soften your spirits. For who knows, in what region of the world hitherto unknown to us, uninhabited by any other mortals, he will send us? He must be totally crazy, who would not first reflect upon this with prudent deliberation. So let us not heed his admonitions. Let us remain in the land in which Fortune, the arbiter of all things, has established us. Observe, and consider this territory of Shinar which we now enjoy. Fix your gaze upon the supreme abundance of everything necessary to our life, look at what a pleasant place it is, how numerous the rivers are which irrigate the fields with fecund flow. Let us possess this soil of blessed happiness, and let us celebrate our name before we separate from the progeny of our clan (for such is the law of inevitable necessity). Truly, since I saw many of you shaken by the fear of the bygone flood, lest in this vast plain in time to come another cataclysm might follow and destroy everything, behold I, your leader will tell you how to be free and immune from the fear of this awesome peril, provided that you do not reject my council. In truth, by what means would might you desire, perhaps, to know? Attend, and I shall tell you right away. Let us make a city that is not just large, but extraordinary in its splendor and magnificence, together with a huge Tower, whose pinnacle will touch heaven, so that if the gales of inundation should ever invade the region, we may preserve our lives in this Tower, as if in the port of our safety. And because the materials for building such a pile are nowhere lacking to us, we will tackle the job under a happy star. Lo, what a great quantity of pitch there is in this place to serve as cement? what an abundance of chalk, clay, and excellent clods of earth? what a great quantity of wood from the crowded trees of the wood? The traffic of the rivers and streams approaches, nor is there lacking, in such a large number of mortals to lend their aid in the raising of this unusual, new, and heretofore unseen theatre. Hev, to work! let us dig up a quantity of chalk and clay, let us back brick in a hot oven, let us delve, and lay out the foundations according to the prototype already conceived by me, expounding the proportions of the work to be built in each of its parts. Let us not delay to act, let us gird ourselves to the task, and have no doubt that it will be to the immortal glory of our name and will rebound to our honor. Let some spade up clay and others collect pitch, let others transport bundles of wood, other construct furnaces suitable for baking bricks, fashion tools suitable for the work, let a host of pack-animals be made ready, and let us begin, let the work blaze forth, and with the greatest carefulness and diligence observe those things which I shall command my architects, and they shall command you, to do." So much for Nimrod.

With these and similar exhortations he wooed the hearts of the people. What more is there to tell? He persuaded the naive mob as easily as he desired, with common impulse and movement, as often happens, they followed him, and they almost all began, not in a confused way, but divided into different functions according to their skills in the different arts they had learned, to work, and to

build the city and Tower. And indeed, lest I appear to be adding something out of my own imagination, I cite the words of Josephus in book 1. However, it is certain that the aforementioned division of languages occurred when the sons of Noah built the city and Tower, as the sacred text makes plain a little further on. What we should examine first here is by what occasion, and particularly by what authority, they undertook this building. In my opinion, the occasion of this structure was this. It happened that around this time the men who were living then, led -- or rather, impelled -- by I know not what spirit, following the example of Arphaxad, who more than 170 years before had crossed the river Tigris and descended into Chaldea with all his clan, themselves assembling in a similar manner came out of the East, as Genesis expressly states in ch. 11, verse 2, that is, not from Armenia, on one of whose mountains the Ark had come to rest, because in relation to Babylon Armenia is to the north, not to the east, as we can see on a map. But it makes better sense that they migrated from the eastern parts of Babylon, to which they had previously come from Armenia. With concerted movement and intent they moved from the aforementioned regions, which were probably mountainous and not very fertile, towards the west in quest of more fruitful and suitable lands, gradually turning towards the south, they discovered a certain broad field or plain which was afterwards called Shinar, and subsequently Babylon. When they had remained there for some time, I am of the opinion that Noah urged his sons and grandchildren, now greatly augmented in number, to hasten towards the lands already divided and assigned to each, and as he thought this would be highly pleasing to God, who had declared to them at the outset of the new world: Increase and multiply, and fill the earth, etc., so also he hoped that this might be so, because he feared that if they tarried any longer together more serious disputes and wrangles might arise amongst them with time. But the enemy of mankind strove to contravene this intention of his holy and provident fatherly mind, just as he tried to oppose other good deeds, as much as he is able. I believe that he did this, in the first instance, by means of Nimrod, the son of Chus, the son of Ham, who, since he seemed to excel the others in powers of mind and body (for he was a great and very famous giant, as we find in ch. 10 of Genesis, according to the Septuagint), greatly hankered to lord it over all the others. So that he might more readily and easily accomplish this, he strove to oblige them all to remain together. And perhaps because he did not dare openly to oppose common sentiment, and contradict Noah, the father of all, he persisted in slyly persuading the people that before they went their separate ways they should leave a monument as a memorial of their power and nobility for posterity, which would serve to celebrate their name and praises for all time. Seeing that this pleased the people and observing that the land of that plane was not stony, but rather clay-like, sticky and suitable for making bricks, and moreover that it abounded in tar-pits, he exhorted them all to unanimously build a great city out of the materials readily available, a city which would be the model and chief of other cities which would be built afterwards in other regions, he exhorted them also to build towers in it to adorn it, and that they erect one tower in particular, more huge than all the others, which would seem to be able to reach to heaven, either as a refuge in time of flood, or as a monument for convening the people. The wily Nimrod proposed such a huge edifice on the pretence that he was giving thought to their reputation for glory and splendor, but in reality of course, so that he might detain the multitude, united and occupied all together with this kind of daily labour, and postpone their departure into distant regions, if not prevent it entirely. He foresaw that they would not thereafter readily desert the magnificent, huge and safe city which they had themselves constructed with so much labour. For this reason he began all the more aggressively to incite them, either personally or through his agents,

to start the work. But this displeased the Lord, who did not hesitate to obstruct the arrogant designs of these men, but knowing their stubbornness and pertinacity, miraculously confused the language of the builders so that they could not understand one another.

Chapter 3. Various opinions on the height of the Tower.

DEMONSTRATION: How it was impossible for the Tower to reach the heaven of the Moon.

CONCLUSIVE PROOF.

Many people have had a variety of opinions concerning the height of this Tower, for Moses does not specify how high it was, but simply states that they wished to build it up to heaven. However, let us explore the meaning of these words. The Hebrew text says [Hebrew text] "And they said, Come, let us build for ourselves a city and a tower, whose summit shall reach to heaven", or literally, "so that its head will be in the heaven". The Greek text matches this [Greek text]. The Chaldaean text reads [Chaldaean text], that is, 'a tower, whose head will reach up to heaven'. In order to analyze this more precisely, let us first examine the opinions of others, and then our own. For as I stated earlier, we cannot know how high the Tower might have been when work ceased because of the confusion of tongues, for neither Holy Scripture, nor Josephus, nor any other approved author has dared to pronounce upon this explicitly, although St. Jerome at the end of the 5th book of his commentary on Isaiah relates that some say that it reached a height of 4000 *passus* [5 pedes = 1 *passus*, 1000 *passus* = a Roman mile, or 1.45 km]. But a little later he adds, "What is testified concerning the said tower seems virtually incredible". The same holy Doctor also cites Herodotus, who albeit describing the temple of Jupiter Belus shortly before the close of his first book, says that it contained a solid tower which was a *stadium* high and a *stadium* thick [=625 *pedes*], on which was imposed another tower, and another on top of that, and so on up to eight [towers]. Therefore, if (as he seems to assume), all of the towers were of equal height, the top of the highest would of necessity have been, not 4000, but at the most 1000 *passus* high. It will be determined later on whether the tower described by Herodotus is the same as the Tower of Nimrod. The opinion of those who think that the Tower was 4000 miles high seems to be derived from the aforementioned words of Josephus, where he says of Nimrod that he boasted that he would build a tower higher than the flood waters could mount. Now since it is agreed that the waters of the Flood covered the tops of the mountains by 15 cubits, and Pliny (book 5, ch. 22) states that mountains have been discovered which rise vertically for 4000 *passus*, they think that Nimrod wished in fact to raise the Tower to 5000 *passus*, and that there remained but 1000 *passus* to go when the work was halted. But even so, it would have to be proved that the building was interrupted then and not much earlier. So let us set aside those matters which cannot be written about and proceed to other things.

They say that poets and pagan writers took occasion from the construction of such a lofty Tower, and also from the memory of the division of languages, to fabricate those two myths which Philo, most eloquent of Jews, relates at the beginning of his book *On the Confusion of Tongues*—one (a very famous one) about the giants who piled mountains on top of mountains in order to wage war upon the gods, but who were cast down by them with lightning, and the other about the irrational animals which, they say, once were wont to communicate

with each other in a common language concerning their affairs, as do men. But because they once dared to ask for perpetual youth from the gods, they were afterwards punished by them with confusion of tongues. But this is not to be wondered at, seeing that it is well known that poets openly chase after opportunities to make up myths, and generally are not embarrassed to be thought of as story-tellers. Indeed, they long ago usurped for themselves a generous degree of license in this area, according to that celebrated phrase of Horace, from the opening passage of the Art of Poetry:

"Whatever is heard is of equal force
with poets and painters "

What is more marvellous, and more deplorable, is the extent of the audacity and temerity of certain impious men, as Philo says above, who dared to cast aspersions on Holy Scripture by saying that it contained fables similar to those just related, not blushing to state that the building of the Tower and the division of languages were fables, arguing that both were mythical and untrue. In their view, the concept of a Tower constructed so that its top could reach to heaven seems ludicrous, and no less impossible than the piling up of the mountains we mentioned earlier. On the erroneous assumption that the variety of languages has always existed, they also argue mistakenly that it seems incredible, if men had only one language, that they could so swiftly forget their own speech and then explain their inner thoughts in new words they had never heard before. Nonetheless, they were incapable of grasping how the confusion of tongues could have been sent at once as a punishment and as a remedy for sin. They cannot see it as a punishment, for they think it natural that different men should use different languages, nor as a remedy for iniquities, for they observe that a plethora of crimes exists nonetheless after the division of languages, and that the cause of wrongs is not unity of language but the propensity of wicked men to do wrong, seeing that even when their tongues are cut out they know how to project the evil in their hearts through nods and glances and other bodily motions no less than through words. On the contrary, it seems that unity of language is useful in many respects, such as conducting business, instructing in the sciences, stabilizing society, consolidating friendships and the like.

It is not, in fact, difficult to respond to these objections. For who cannot see how different those things related by Moses are from those concocted by the myth-makers? For it is obvious that human beings cannot naturally pile mountains on top of mountains, and thereby make war upon the higher powers, however, building a very high tower does not exceed human capacity. And indeed, I acknowledge that what they claim the giants intended to do to be able to scale such heights to heaven is very foolish.

But Scripture does not say that the Tower of Babel was constructed with the same intention. Perhaps its detractors are deceived by what is said in Genesis 11:4 "so that its summit shall reach to heaven." But all the sacred commentators acknowledge that this is said hyperbolically. What did they hope to achieve with that huge building? what else, save human glory and an eternal name, as these words reveal "that we may celebrate our name." Yet perhaps some of the more simple-minded thought that it was really possible to build a tower up to heaven, or that it was at least possible to preserve themselves at the top of that tower from the flood, should it ever recur, especially as they knew that the waters of the flood had covered the mountains by fifteen cubits. In fact, the account of the confusion of tongues differs considerably from what the fable related concerning the brute animals, or it can be discerned from this that speech is natural to man, but not to brute animals. For it is obvious that what they have concocted

concerning the speech of the brute animals is a fable, while what the sacred utterances affirm concerning the single human speech, subsequently varied by divine means, is assuredly very true

Indeed, in opposition to Philastrius, we shall demonstrate that the division of tongues did not always exist. For the present we shall assert this much: that according to our faith it is most certain and true that right up to the building of the Tower of Babel there was one language common to all, and not many. For who can believe that one people, descended from one man who was even then still alive, and who were as yet still living together, could have diverse languages? And if you admit this, then how could this language have been so swiftly varied: and in so many ways? I reply that no ore of sound mind could not know that this sudden variation did not arise from natural causes but from the will of almighty God, to whom nothing is difficult, nothing impossible. We concede that unity of language is often a very useful thing for mankind, and that on the other hand diversity is very inconvenient in many respects. Nonetheless it is also certain that in this particular case it was a most apt remedy for human transgression, and that nothing else more unsuitable could have supervened.

For who does not know that unity of language is capable of telling against a mob which conspires evil together? Indeed, it is capable in no small measure of provoking them to perpetrate a crime. Justly therefore against those men who wished to build a city and tower and inhabit them together and leave the other regions of the earth uninhabited, which is utterly contrary to public good and to divine injunction -- justly, I say, did the Lord divide them from one another by a confusion of tongues, and drive them out severally to inhabit other lands. And if we think logically about what was said above, and accurately weigh the circumstances of the time, the place, and the intention of those men, then beyond all doubt even if we set aside the authority of the divine narrative, it will be necessary to admit that the division and multiplication of human languages is not a fable, but true, and indubitably accomplished by divine counsel, and justly inflicted as a punishment upon the pride and impiety of those who wished to build, when God forbade them to, and also that their wicked intent, pernicious to the entire human race and the whole earth, was suitably impeded by such a remedy. These things are briefly said against those who lightly reject the Scriptures out of impiety.

But let us return to our subject. In truth Philo says in his book *On the Confusion of Languages* that he believes those who think it was possible to execute [such a work], when he refutes the calumny of the pagan sages against this account by Moses. "In these matters," he says, "they offend against the teaching of our elders. These impious men, so very clever at launching accusations against just laws, and caught by the hook of impiety, cavil at Moses' account of the Tower, and mock us. 'Do you still extoll your laws,' they say, 'as if they were the rules of truth? Look, the sacred books, as you call them, contain fables such as you are wont to ridicule when they are related by others.' From these same words of the sacred text, 'To the people is one and of one speech, and they have undertaken this, nor will they desist, nor will they desist from their schemes until they have accomplished them', others show that they believed that what they had devised in their minds was possible." Almost all the Chaldaean, Arab and Jewish commentators assert the same thing. Concerning these words, [Hebrew text] Let us build us a city and a Tower, whose top shall reach to heaven', Ralbag asserts that these primeval men were lead by a certain curiosity that they might see with their eyes and scrutinize directly what kind of body the Sun and Moon, from

which they thought the Flood had come, might be. Rambam [Maimonides] says about this passage that the impious progeny of Ham, since it was given to astrology and marvelled at the beauty of the heavenly realm, continuously surveying the stars and the heavenly bodies, was inflamed with a vehement desire to know the disposition of this realm. Again Rambam in [the book] *Mora Nebuchim* [*The Guide for the Perplexed*] says that Adam came to this earth from the Moon, bringing with him strange fruits, and the branches of golden trees, and he claims that this, be it fable or opinion, was certainly the tradition of the Sabaeans. Hence when the pact had been initiated, each cried out to other, "Come, let us make for ourselves a city and a Tower, whose top shall reach to heaven." "Let us see," they said, what is the disposition of things up there, what laws and what plan of government obtains, let us see if there is a way of overcoming the fatal influxes of those bodies, and by a deed that will be remembered though all time, let us celebrate our name amongst our posterity, let us do this while the unity of this infinite multitude of people makes it possible, lest perchance if we be dispersed forthwith, the power to carry it through should be lacking as well." In our opinion it was from this that there arose in later times that myth about the giants, as told by Ovid:

"They say that the heavenly realm was assaulted by giants
And that the mountains heaped together were raised to starry heights
Then the omnipotent Father with a bolt of lightning cracked Olympus,
And hammered down Pelion, piled atop Ossa."

From the things related thus far it is clearly evident that a brutish people, as the authors we have quoted declare, driven by temerity or impiety, aspired to make this prodigious pile.

Whether a construction of this type could be made by any natural power, such as they themselves claim, we undertake to demonstrate by mathematical logic, particularly since we, having already been consulted by many people on this question, accepted the challenge to demonstrate this problem publicly. In order that we might proceed in an orderly manner and without confusing things, in this work of confusion, first, where the location of the Tower was, and if they wished to raise it up to heaven, how big that Tower would have had to be, how many workmen would have been employed in the erection of the Tower, how much material it would have required, and how much time would have been expended in completing it, we conclude nonetheless that a work that big that it could be made by any [no?] conceivable natural power, or rather that all sane men ought to believe that it would have defied the powers of demons and of nature itself.

In what has gone before we have shown the form of the Tower constructed by Nimrod, such as both our own conjecture and imagination, and the authority of other authors, can prescribe. It yet remains for us to demonstrate what its form would have been, and how high and wide it would have had to have been, if they wished the Tower to reach to the vault of the Moon.

A DEMONSTRATION OF THE IMPOSSIBILITY OF THE TOWER REACHING TO THE MOON.

Thus they are said to have come out of the East, that is, from the eastern part of Mount Ararat, at which point there is a great discord amongst the authorities, since they do not grasp how they could have come from the East, when Mount Ararat, or Armenia, where the people, having been multiplied, first lived, is not to the east but to the north of Babylon. We will explain this matter on

geographical principles by repeating some of what we said earlier. Since Mount Ararat, as is plain from the geographical work cited above, being part of a chain of mountains, juts out from west to east—as it appears here, in a long tract of land, the men, since they sought an exit to the west but could not find one, being blocked off by the mountains—were channeled into the eastern slopes of the valleys, followed twisted and tortuous ways they came down from the mountains in the east and turned towards the west, whence they came into the plain below the mountain. There, as we said earlier, they lived for many years, evidently in that region which afterwards was called Media and Persia, Bactria and Parthia. And then—in order that the transmigration of peoples might begin, they moved from this eastern region into this plain, and discovered the field of Shinar, watered by the two greatest rivers of Asia, Tigris and Euphrates, and a most suitable place for building the Tower. It is agreed that assuredly all mankind was congregated in this vast plain when the location of the Tower was assigned, for it was in this place that the languages of all the earth were confounded.

First we should ask to what numbers mankind might have propagated by the 275th year—such being the interval between the Flood and the building of the Tower. Although I previously attempted to calculate how much the human race multiplied in a space of 130 years, we shall nonetheless embark upon another calculation more appropriate to our plan. Let us suppose therefore that the entire human race was brought together from three couples preserved in seed (?) by the singular providence of almighty God from the Flood. Secondly, that in the course of several years, several partners procreated both male and female offspring—and that these would have been ready for marriage at 14 years of age. Given this, by a sure combination of particular circumstances, we find that the human race could have propagated to 9,094,468 human beings of both sexes, although Theophilus Remandus asserts in his chronological tables that 14,000,000 were present at the Tower. Whence we—for purposes of this demonstration—will retain the lower figure as more plausible—to some it might seem _____, but it is necessary—having posited what we put forward, to produce this number, nor does it differ from that which we adduced above from the Rabbis. Let us, then assign half of them to the building of the Tower, that is, 4,547,234, for it is plausible that the community's tasks were divided amongst certain classes or orders (as was said before) so that some were occupied in building dwellings and shacks, others in felling wood, others in digging up clay and collecting pitch, others in firing bricks, and others in gathering provisions and produce in order to sustain such a large population.

These matters being settled—one might now inquire, if they wished to build a Tower whose top would reach to the first vault of heaven (as the Samaritan text has it), or to the heaven of the Moon, how high [the Tower] was intended to be. We shall answer this question as we can first demonstrate the height of the moon from the Tower by geometrical logic.

Now since it is known—according to various arguments by the most eminent mathematicians, that 60 Italian miles—corresponds to one degree of the [circumference of the] Earth, suppose that 1 is to 60 as 360 is to X, the operation being done according to the rule of proportion, it will produce a total equinoctial circumference of the earth of 21,600 miles. Since according to Archimedes' proof the circumference of any circle is in proportion to its diameter in a proportion of thrice sesquiseventh—[?] and is to itself as 22 to 7 or 21 to 7. If so, if 22 is to 7 as 21,600 is to X it produces a diameter of the earth of 6872 or rather 6872 8/11 miles, the radius, or half of this—is 3436. The global surface of the Earth can then

be obtained by multiplying the circumference by the diameter, which gives 148,456,800 miles. Its volume is obtained by multiplying the diameter of the Earth by ² of its surface area: this yields 3,400,155,648 cubic miles, the volume of the whole terrestrial globe.

Having found the radius of the globe of the Earth, one can derive from it the distance from the centre of the Earth to the globe of the Moon in Italian miles. I will not present here the method by which mathematicians arrive at the knowledge of the distance of the moon and other planets from the Earth to their proper spheres, since our *Ars magna lucis et umbrae* and the works of other astronomers are full of discoveries of this kind, but I shall simply assume the distances established in various observations by the most eminent mathematicians, and encountered everywhere.

The distance from the centre of the Earth to the Moon is threetold: it is at its maximum at apogee, at its minimum at perigee, and at its mean at the quadrature of the moon. In order to show the truth of our demonstration we have chosen the mean and smallest distance, which many astronomers recognize as 56 or 52 radii of Earth (see Tycho, Kepler, Copernicus and the moderns, Blancanus, Ricciolus and innumerable others). Take, then, the radius of the earth, which we discovered a short while ago was 3436 Italian miles. Given this, if you multiply 3436 miles by 56 radii, that is, the distance from Moon to Earth, you will have what you are looking for, that is, 192,416 Italian miles, the distance from moon.

Our Tower would have had to be that many miles high in order to reach the heaven of the Moon. Therefore, having explored the altitude of the Tower, let us see how great a mass its volume would have contained. To begin with, we posit, following the opinion of certain Arabic authors, that the Tower was conical, which others have thought was square, and in diameter, or on one side, it covered 8 miles, or 8000 passus. Its area was 64 square miles, according to the calculation of Archimedes, the square of any diameter is to the area of its circle as 14 is to 11, so multiply 11 by 64, and when the product is divided by 14, it gives the area of the circle as 50 (or more accurately as 50 $\frac{2}{7}$) square miles, or 50,000 passus, which again according to Archimedes' rules for the dimension of cone and cylinder, multiplied by a third part of the altitude of the Tower, that is by 59,557, yields the volume of the whole Tower as 2,977,850 cubic miles.

Furthermore, because one mile contains 5,000 geometric feet, which is the equivalent of 1,000 passus, then one square mile, according to the rule of tetragons and cubes, will contain 25,000,000 feet, and a cubic mile will contain 125,000,000,000 cubic feet. Now let us suppose that the side of one of the baked bricks corresponds to a geometric foot, and that six square stones of this kind make a cube. The number of such stones will be 125,000,000,000, that is, [the number] of cubic feet, when multiplied by the total volume of the Tower will give the amount of cubic bricks required for building this immense pile as 374,731,250,000,000,000. Since the whole Tower was divided into various compartments and habitations, let us take away from the total volume $\frac{1}{1000}$, and there will remain this number 374,354,625,000,000,000 as the total volume of the Tower, which is a figure so immense that the mind can scarcely conceive of it. Hence from this calculation of the Tower there follow innumerable absurdities.

CONCLUSIVE PROOF

It follows, first That if for the space of 3,426 years, 4 million men laboured continuously, and if the Tower rose by one mile every week, the Tower could not have been finished in the said space of time

It follows, secondly If the wood from all the forests in the entire world were transported to one place, and if the whole globe were reduced to mud or clay, and if all the oceans and seas and rivers were turned to pitch, the wood would not suffice to bake the bricks, nor would the whole earth be able to produce enough clay or the sea enough pitch In order to build this structure it would be necessary to create a new earth twice the size of the present one

It follows, thirdly that if a horse were to ascend 30 miles per day up the declivity of that spiral, it would not reach the top of the Tower in 80 years

It follows, fourthly that this Tower would by its weight have exceeded the earth by many parasangs (1 para sang=3.5 miles), which may be demonstrated thus Suppose the Tower is ABD, and the globe of the Earth BCDE, and the centre of the world is O If then the whole globe of the Earth would not be sufficient to complete this building, and therefore if a Tower of the demonstrated magnitude could be erected upon Earth with God providing the requisite material from elsewhere, it would be necessary for the Earth for the Earth to be as far above the centre of the universe as the excess weight of the Tower surpassed the weight of the Earth Since we found according to the laws of statics that this excess constituted ten radii, we concluded that the centre of the terrestrial globe would not then be at O but at I, and then it would coincide with the centre of the universe Were this so, then the whole earthly globe would be outside the centre of the universe, and the whole world would be destroyed Let the reader examine the diagram appended hereto, and he will find that what we say is true Futile, therefore, and foolish was the presumption of mortal men, not (I say) to think of such a thing, but rather to wish to accomplish it As a result, justly for their envious temerity against God and man, when they attempted arrogantly to wage war against heaven, God decided that such temerity should be punished with confusion of tongues

Chapter 4. The form and architecture of Nimrod's Tower.

The time nonetheless drew near when Nimrod would bring forth that which he had conceived in his mind many years before concerning the construction of the lofty Tower which would touch the heavens with its summit Therefore, having selected and summoned architects from amongst the well-nigh infinite multitude of men, and in particular from amongst those of his own clan, he apprised them of his complete plan, he instructed them most diligently in the execution of all those things which pertained to the aforementioned construction, prescribed the measurements of the entire fabric, and showed them a model or prototype made of wood or clay for them to follow, inasmuch as it is likely that he, as he exercised power with the highest judgement, had drafted out this work of so great size, conceived many years before, not thoughtlessly and with a certain haphazard resolution but with mature and quite deliberate spirit Therefore the architects were dispersed into certain groups Some presided over the laying of the foundations and the directing of the labour of the quarries, and others were occupied in digging clay, and felling wood and trees, having already been instructed in how to bake the bricks in the ovens, some were responsible for collecting pitch, digging up stones, and in preparing iron tools such as mattocks,

basins (?), hammers, screws, scoops, gnomons, grappling-hooks, and other tools necessary for building, and there were not lacking those to supervise potters and artisans skilled in making wooden vessels for carrying lime, ladders, machines for lifting stones, and beams for scaffolding. Because provisions and food produce was necessary for such a great multitude of laborers, it is likely that certain overseers were constituted who distributed to the workmen at the appointed time the produce collected here and there and conveying it as well to the requisite place by a great number of camels, horses and donkeys.

These things having been established through his servants with singular providence, he began the construction. First he laid the foundations in a round shape, or as others think, in a square shape (we opt for round), according to a quantity of circumference measured out, then above the foundations they embarked upon the shape of the fabric. And first, for the initial level or storey, they raised up a circumference or peridrome to the height they wished, by which the men and animals laden with pitch and bricks might easily move about, having been constructed with bays and railings so that the animals would not fall over. Then to the plane of this peridrome from the lowest point of the base of the Tower a spiral stairway or helix of sufficient width was prepared by which along a sloping track, as low as could be managed, an easy ascent was given to the animals. This first substructure was propped up from below by various chambers, storerooms, and furnaces, set apart both for the nocturnal repose of the workmen and for the necessary provisions. When this first storey of the Tower had been completed, they embarked upon the second storey, according to a measure agreed upon by themselves, to which from the first peridrome by the spiral or helical staircase ascent was provided to the second. And thus from one peridrome to the next by spiral staircases it rose up to that height which God allowed to them, when by the confusion of languages he compelled them to abandon the work they had begun. So that the reader might more clearly contemplate the fabric of the Tower, we have here appended a picture -- not a genuine one, to be sure, but what we have been able to conceive with our mind.

It should be noted that before Nimrod began construction, he first took thought to build dwellings, cabins and houses (lest such a great multitude of men be obliged to live under the open sky, exposed to the atmospheric injuries) and constructed it in the form of a city. And this, I think, was the city to which Moses refers in Genesis: "Come, let us make for ourselves a city and a Tower." These cabins were at first rustic and crude, disposed without any order, but because people made such great advances in the art of architecture in building the Tower, Nimrod improved its form and aspect, and built it up at the confluence of the Tigris and Euphrates. Seventy years later, Semiramis adorned it with stupendous and magnificent buildings, as we shall shortly see. The reader ought not to think that the storeys of the Tower, raised upon a continuous base, indeed upon giant chambers, were endowed with rooms and storage chambers, through which from the peridromes entrance was provided everywhere (???) Holy Scripture is silent as to the altitude to which Nimrod raised the aforementioned Tower before they ceased from prosecuting the work. According to the various opinions of the authors cited above, there are not lacking some who think that its vertical height reached as high as a mountain, others to a mile, others four miles. The reader may choose that which pleases him best. And this suffices concerning the Tower of Babel.

SECTION II. The stupendous and prodigious marvels of the cities, towers and gardens constructed after the death of Nimrod by his sons Ninus and Chusi, and by Semiramis

Chapter 1. Ninus and his deeds.

Various things are related of Ninus, first emperor of the Assyrians and thereafter first emperor of the whole world, by sacred and secular writers. We shall present a few, following Herodotus, Diodorus Siculus and Strabo. As we stated in *Arca Noe*, Ninus was the one whom Holy Scripture calls Assur, who is said to have set out with his army from the land of Shinar, that is from Babylon, where his father had reigned, and after subjugating the Assyrians, to have built in Assyria the cities named therein, and one city greater than all the rest which he named Niniveh after himself, to which he transferred the seat of his kingdom from Babylon, and from that point on he began to be called Assur, that is, king of the Assyrians. Many other famous deeds of Ninus, drawn from Ctesias Cnidus, are related by Diodorus Siculus in Book 3, chapter 1 of his *Antiquities*, where he says: "Ninus, first king of the Assyrians, attached to himself writers who passed on his deeds in their texts. Being of a bellicose nature and desirous of manly achievement, and having first trained the most robust of the youths over a long period of time through the exercise of arms to constancy in effort and to the perils of war, he struck an alliance with Aricus, king of the Arabs." And a short while later he adds: "Having enlisted the king of the Arabs, Ninus led his army against the Babylomans who bordered on Arabia. For Babylon was not yet built, but other noble cities in its vicinity were inhabited. These, because they had ceased to be accustomed to arms, were readily conquered, and when a tribute had been imposed, [Ninus] put to death their king, whom he had captured, together with his wife and seven sons. Greed to dominate all Asia between the Don and the Nile laid hold of Ninus, elated as he was with success, propitious events most often provoke ambitious desires in the great. Therefore, having appointed a governor for Media from amongst his friends, he set out to subjugate the rest of Asia, in seventeen years he brought it all, except India and Bactria, into his power. No writer has chronicled all his battles or the number of those he conquered. Following Ctesias Cnidus, we shall relate a few of those which are considered outstanding. He subjected all the maritime peoples and those bordering on them, the Egyptians, the Phoenicians, the interior of Syria, Cilicia, Pamphlia, Misia, Lydia, Troas and Phrygia which is beyond the Hellespont, Propontis as well, Bithynia and Cappadocia, and the barbarian peoples around the Black Sea as far as the Don, he made his prize. To his empire he added the Cadusii, the Lapyri, the Hyrcanians, the Drangas, the Dermci, the Carmani, the Rhombi, the Vorcanni, the Parthians, the Persians, and subsequently the Susians and the Caspians (up to whose pass he fought, whence they are called the doors of the Caspian) and many other ignoble nations, to list which would be too prolix for this work." Thus Diodorus, as above. In chapter 2 he relates, following Ctesias, that Ninus had in his army 170,000 infantry, 1,200 cavalry and little less than 10,600 scythed chariots, and that he overcame and conquered Zoroaster, king of the Bactrians, who came against him with 40,000 armed men. It happens that this victory of Ninus over Zoroaster was won after the building of Niniveh, as is plain from the words of Diodorus Siculus. Moreover, this Zoroaster is identical with Ham the son of Noah, says Berosus Ammianus in Book III of his *Antiquities* (as Ioannes Lucidus writes in Book 2, chapter 5, and we endorse these things in *Obeliscus Pamphilus*), and adds that the name Zoroaster was given him because he was always studying magic and sorcery, but Tornellius denies this. See *Obeliscus Pamphilus*.

But at the same time, there are four points to be noted in this account of Diodorus' which we have reproduced. First, that [Diodorus] supposes that on the death of his father Belus, who had reigned in Babylon, Ninus either was expelled by the Babylonians, and therefore held it necessary to wage war against them, or else he departed thence in order to fix the seat of his realm in Nimveh, and for this reason the Babylonians, waxing indignant, revolted against him. The latter is more in harmony with Holy Scripture, and Genesis 10-11 alludes to it rather plainly in these words: "Assur went forth from that land, and built Nimveh." Secondly, it is necessary to explain Diodorus' statement that "Babylon was not yet built." What this means is that it was not yet finished and completed, nor at the level of population, wealth and magnificence of buildings with which it would later be constructed by Semiramus, wife of that same Ninus, for it is plain from Holy Scripture that Nimrod, first of all mortal architects after the flood, built the city and the Tower, and other cities besides Babylon—Babel, Achad, Erech and Chana. Hence St Augustine at the end of *The City of God* Book 18, chapter 2, speaking of Semiramus, says: "Some think that she built Babylon, which indeed she could have founded. But when and how it was built we have stated in Book 16, chapter 4, thus far Augustine. Moreover, what Diodorus says about Egypt and the adjacent regions being subject to Ninus seems to require an explanation, for he either did not possess them completely, or did not possess them for long. For in Abraham's time neither Egypt nor the land of Canaan seems to have been subject to the kings of Assyria, indeed, it is certain that at that time there reigned in Egypt that Pharaoh to whom Abraham repaired, driven by the famine in Canaan, as is described in Genesis 12, and amongst the Palestinians there was Abimelech (Genesis 20 and 26) and many other minor kings in the Canaanite cities. From the time when Abraham arrived in Canaan, one finds no mention in Genesis of Ninus or any of his successors, which would be very unusual if he or any other king of the Assyrians were lord of that land. Therefore if those things are true which Diodorus relates of Ninus (inasmuch as Pererius in Book 15 of *De Genes. num.* 149 asserts that they are highly credible and worthy of being received, and they are approved not only by the pagans but also by our ecclesiastical authorities) nonetheless a reasonably plausible argument can be made against Pererius and those of his opinion on the issue of whether the genealogy of Canaan should be derived from the genealogy of Shem, which is not found in the sacred text of Genesis, and also whether the division of languages ought to be placed at the birth of Peleg, and the birth of Abraham in the 70th year of Terah. Were this the case, the age of Ninus could not be later than 220 years after the Flood. For from the Flood to the birth of Peleg (deducting the generation of Canaan) there is only 102 years, and from the division of tongues, if it occurred then, until the end of the reign and life of Ninus, there remains but 117 years, that is 65 years in which Belus reigned, and 52 for the reign of Ninus, this makes a total of 219. I cannot but marvel that in such a brief span of years the human race could multiply to the extent that so many provinces could be full of people, and so many kings could have armies. If against this one admits and adds in the generation of Canaan, as do the Seventy, and grants that the division of languages happened in the 144th year of the life of Peleg, and that Abraham was born when Terah was 130 years old, as we hold, without doubt the end of Ninus' reign fell not far beyond 400 years after the Flood, as can be seen in the chronological tables. In that case it is much more credible that the multiplication of mankind could have increased to such a degree that Ninus and Zoroaster could command in battle armies as numerous as those we have described above. But in order to return to Nimveh, founded by Ninus, lest we seem to leave out any point of curiosity in this work, we here had

a description of this city

Chapter 2. The building of the great city of Niniveh, and its extent.

We read that from the beginning of the world there have been various cities which covered immense territories, constructed down through the ages by diverse kings, such as the writers on Egyptian antiquities have recorded concerning Memphis, Thebes and Heliopolis in Egypt, and as we have shown at considerable length in volume I of our Oedipus. Both Marco Polo the Venetian and our [Jesuit] fathers have related marvellous things concerning the vast cities of China, on this subject, read, if you wish, our China illustrata. Nor were there wanting as well in Europe under the dominion of the Romans cities of unbelievable size, such as Rome, Syracuse, Carthage and the like, and in modern times Rome, Cairo, Paris, Amsterdam, Lisbon etc., but I have never found one that matched Niniveh for size. So that we may discuss this matter accurately, we shall begin with Holy Scripture itself. Jonah 3.3 says [Hebrew text] "And Niniveh was a city great before God, of three days' journey." The Greek has it [Greek text] "And Niniveh was a city great before God, as it were of a three days' journey." The Chaldaean says [Aramaic text] "And Niniveh was a great city before God, of three days' journey." The city is said to be "before God" because the Hebrews habitually indicated something large in this way such as "the mountains of God" for very high mountains. Here the translators have gone into the most marvellous contortions when it seems that they could not adequately comprehend the size of the city. Hence they seem to explain this three-day passage of Jonah in various ways, and by various circumlocutions. For some take the circuit of the city to be a three-days' journey. Others think that the three-days' journey should be understood thus: that it would take three days to traverse each and every one of the streets of the city. Of course, they are raving here, for it takes more than three days to traverse all the streets of Rome alone, but not the same time to walk around it, which can easily be accomplished in the space of six hours. Nor can it be taken to mean, as some think, that it was a three days' journey from the sea of Syria where Jonah was vomited up by the fish, to Niniveh, because the shore of Phoenicia is more than 300 miles from Niniveh. Moreover, this seems to contradict the sacred text, in which it is expressly stated "And Jonah reached the city after a journey of one day." Therefore the three days' journey which measures the city ought to be understood in this sense: that from his entrance into the city, which Jonah accomplished in a journey of one day, it would require three days to cross the city in a straight line. The rabbis quibble when they say that Jonah was cast into the Red Sea of the Erythraean Sea in order to bring him closer to Babylon, but although they pronounce 'Phoenician' and 'Erythraean' the same in Greek, yet do not understand that they are one and the same thing, their mistake is forgiven on account of their habitual ignorance. Setting this dispute behind us, we therefore state that the true and genuine meaning of Holy Scripture ought to be understood in the sense of the diameter of the city, as shall be made plain in the description with follows. For the city was divided by various streets, of which two, traversing its length and breadth, held a preeminent place within the city, on these were situated the mansions of the nobility, just as we see in Rome on the very long street called the Corso. It is called the Corso because the most eminent spectacles of the city, and the entrances of princes and noblemen, were staged there with a notable display of horsemen, as was also the custom in many other large cities. Such was the three-day street of Niniveh which divided the city in two, and through which Jonah, having entered the main road by a journey of one day, preached repentance to the Ninivites. For as Rabbi Ralbag states correctly,

[Hebrew text] "Niniveh was a great city, being three days from end to end." In order that what I am saying may be shown to be true, I have elected to place before the eyes of my reader a full iconography of the city according to the description of Diodorus, so that anyone may easily apprehend the incredible and immense size of the city from its form and aspect, its length and breadth, and the multitude of its walls and turrets. Now what Lucan says about Rome -- "The city is one house, the city encloses many towns" -- (which I would not wish to assert about Rome itself, enclosed within its walls, but rather, as we have demonstrated at length in our *Iatium*, about the suburbs, whose frontiers extended to the Phalisci, the Sabines, to Tibur, Praeneste, and even to the Tusculan hills and to the kingdom of the Volscii, Ostia Tyberina and the Centumcellae, as Ammianus Marcellinus says) ought not to be understood as contradicting what I have said about Niniveh, for this was a city enclosed all around with mighty walls, as we have learned from Diodorus.

[Demonstratio of the form and size of Niniveh]

Following Diodorus' description, suppose that the long side of the rectangular city was 150 stadia long, which translated into passus gives a length of 18,750 passus, for 125 passus makes a stadium. 18,750 passus divided by 1000 gives 18 miles, with 750 passus remaining. From this calculation it appears that this was the length in miles of the long side. The short side was 90 stadia, which gives 11,250 passus, and this translated into miles gives 11 miles and 250 passus for the length of the short side. The circumference of the city will be 480 stadia. These sides, the short and the long, yield an area for the city of 198 [square] miles, and a little over.

From this calculation it follows, first, that if the longer side of Niniveh was 18 miles long, that would equal the distance between Rome and Tibur. By way of experiment, we have frequently traversed a distance of a comparable number of miles by a journey of this type, which many ordinarily hold to be 17 miles. Since we have found that the short side of the wall [of Niniveh] extended 11 miles, this wall will be as long as from Tibur to Praeneste. If we add the [second] long side, through Tusculum to Albanum (which is a distance of 18 miles), and from thence to Rome (11 miles), we will have rectangle which covers the greater part of *Iatium*, whose area will contain 198 square miles plus 750 square passus. From this it is evident that Niniveh was an exceedingly large city, and enclosed within its walls almost the whole of the province of Atturia or Assyria. Diodorus says that beyond its walls there was besides an immense suburban area which stretched from the Euphrates across the region of Mesopotamia to Niniveh, and that travellers' accounts demonstrate very thoroughly that beyond the Tigris, and joining Niniveh to the borders of Media and Elam, there extended a vast rocky plain, which even now can be seen there, as will be evident from what follows. This ought not to astound anyone, since Ctesias, following Sabellicus, says that all Asia was summoned by Ninus to construct [Niniveh], and was occupied in doing so. According to Diodorus, Ninus "forced the majority of the Assyrians to live in [Niniveh], particularly the nobles, and enlisted of their free will men from the surrounding nations. He called the city Nina after his own name, and divided the adjacent fields amongst the inhabitants." [Niniveh] was larger than Babylon, as Strabo relates in these words. [Greek text]

As we stated above, its site was on the western bank of the Tigris, and as is specified in the sacred text, it was a large city, three days' trip, whose length readily extended to the bank of the Euphrates, and whose width occupied almost

the whole breadth of Mesopotamia. The whole city was irrigated with various watercourses and canals, as Herodotus, Diodorus and Strabo relate, lest there be lacking any of those things so very necessary to human life. Diodorus relates that there were 1500 towers in the city, not all of which were incorporated into the fortifications, for it is evident that in a circuit of 480 stadia there would have to be one tower every 32 feet. Since, then, Diodorus says nothing about towers incorporated into the fortifications, it is probable that some were constructed in the fortifications, some above the main gates, some at major intersections of the city's streets, and some even in the suburbs of Niniveh. But now let us go on to discuss the first foundation made by Ninus.

As Ctesias Chius, following Sabellicus, relates, Ninus, after having subdued the Bactrians in war, brought his army back to Assyria loaded with rich booty. Shortly thereafter -- as he had already begotten a son by Semiramis, who bore the same name as his father -- he departed this life after handing over the government to his wife. He was buried in an enormous pyramid. Ctesias Chius testifies that it was 9 stadia high (which make 1125 passus) and that its sides extended somewhat further, they record that it was built in the midst of a plain at a distance of a few stadia from the city of Nina. This sepulchre of the kings left behind vestiges for a long time thereafter, though the city of Nina itself fell during that period, for the kingdom of Assyria was overthrown not long afterwards by the Medes. Strabo says almost the same things concerning the tomb of Belus in Babylon, save that its height is different. [Greek text] "In that place is the tomb of Belus, now overthrown, which it is said that Xerxes built. It was a square pyramid constructed of baked brick, a stadium high, and each of its sides occupied a stadium. Alexander wished to restore it, but since the task required a good deal of work and a lot of time (for to clear away the earth alone necessitated ten thousand men working for two months) he was not able to finish what he had begun. For he was laid low by sickness and death, and none of his successors showed any concern [for the project]. Indeed the remains were neglected, part of the city the Persians destroyed, part of it time consumed, but especially the negligence of the Macedonians. Afterwards Seleucus Nicator built Seleucia on the Tigris at a distance of thirty stadia from Babylon.

Anyone might rightly suspect that Ctesias' statement that the pyramid destined to be the mausoleum of Ninus was nine stadia high is hyperbole. Since the proportion of pyramids is such that the altitude equals each of the four sides, the area of the said pyramid would of necessity have been 81 square stadia or 1,265,625 square passus, which covers one square mile plus 265,625 passus, and nothing greater than this has been seen in all the world. Be that as it may, we consider it a myth, since it would surpass the highest mountains, according to the account we have from Diodorus. Note the figure much more congruent with reason given by Strabo, and juxtaposed to the iconography of Niniveh.

We may conjecture that Ninus founded the city of Nina, or Niniveh, in about the twentieth year of his reign, according to what Diodorus Siculus has written in book 3, chapter 1 of his *Antiquities*, where he says of Ninus that, after having recovered the kingdom of Babylon, and after having annexed a part of Armenia, and having generously restored it to its king, and after having slain the king of Media, was elated with prosperity, and resolved to subject to his government all Asia which lay between the Don and the Nile. "Having set up one of his friends to rule over Media, he set forth to subjugate the rest of Asia, and in seventeen years he brought it all under his sway save for India and Bactria. Then he waged war upon the Bactrians, but realizing how difficult the terrain was, and how

strong his enemies, retreated in order to protect himself, and abandoned the expedition. But meanwhile, having brought the army back to Asia, since he thought himself to be above all others in glory and in great deeds, he decided to build a gigantic city as well, whose equal in size there had never been before, nor ever would be thereafter. Therefore, coercing men from all about, and having prepared what was necessary to such a work, he built it on the Euphrates. This is from Diodorus. Where nevertheless all the ancient and modern writers contradict him, is in stating that it was founded on the Tigris, not the Euphrates, unless we wish to say that its suburbs extended from the Tigris to the Euphrates, as we said a short while ago, and as others imply as well.

From this it seems plausible to deduce that Nimveh began to be constructed in about the twentieth year of the reign of Ninus, as was stated. For after the seat of the kingdom had been transferred to Assyria, and after Babylon had been recovered, and the king of Media defeated, he subjugated Asia for seventeen years.

The same author continues immediately with the subject of the the size of the city, saying that it was founded and erected with sides of unequal length. For two parts of the wall were longer than the others, as we showed a little earlier. "Each side," he says, "was 150 stadia long, but the shorter sides were 90 stadia." And truly, his hope was not frustrated. Never thereafter was built a city of such great circumference, or of such magnificent fortifications. The walls were 100 feet high, and wide enough for three chariots to drive abreast. There were 1500 towers, 200 feet high. He forced most of the Assyrians to inhabit the city, especially the nobles, he enrolled volunteers from the other nations. He called the city Nina after his own name, and divided the adjacent field amongst the inhabitants. So much for Diodorus. What this author says about the amplitude of the city harmonizes with what Holy Scripture says about the same in Jonah 3:3, in these words: "And Nimveh was a great city of three days' journey", namely in diameter. For it is plausible that Jonah, in preaching repentance, travelled not around the circumference, but through the middle of the city. For if, as they think, a stadium is one-eighth of a mile, then 480 stadia make a journey of 60,000 passus, which foot-soldiers usually cover in three or four days. Hence it is evident that Genesis 10:12 may justly call this city by the epithet of 'great'.

Approximately during this time, it is very probable that the same Ninus, because of his enormous power and his eminence above the other kings of the age, having obtained the title of monarch, erected the first monarchy, which is called the Assyrian. We have taken not of this, as well as of the three other great monarchies of the world, their several kings in successions, their proper places and times. Not because it is our intention to construct a chronology of foreign kings, but because it contributes considerably to order to give order to our teaching at least to note those four principle monarchies or kingdoms which Daniel 2:38 records under the symbol of that great statue which had a head of gold, breast and arms of silver, belly and thighs of bronze, and calves of iron, and which Daniel 7:3 records under the allegory of the four beasts rising out of the sea. So does Zachariah 6, in the image of the four chariots coming forth from between two mountains of brass. By these similitudes the various distinctive characteristics and properties of these kingdoms are adumbrated. It is not our intention to go into these here, for they cannot be explained briefly and at this stage it is not for us to pursue these matters at length. Now the first of these kingdoms was that of the Assyrians, the second that of the Medes and Persians, the third that of the Greeks and the fourth that of the Romans, albeit the second

and third kingdoms are discussed at greater length in that same prophecy of Daniel ch. 8, in the allegory of the ram and the goat which make war upon each other, and in ch. 11, where the downfall of the Persian monarchy, the rise of the kingdom of the Greeks, and the conflicts which arose among the successors of Alexander the Great, are briefly foreseen. Only these four monarchies are mentioned in the sacred books, not because none would ever arise after them until the end of the world (for we see that the empire of the Turks has succeeded that of the Romans, and others will probably arise after it), but because only these four were ordained to precede the rule of Christ, which will endure in this world up until the last judgement, and following that, will endure perpetually in heaven, as is plainly signified in Daniel 2:35-35, where it says that the stone which smashed the statue and broke down those four kingdoms became a great mountain and filled the whole earth. That stone was a symbol of Christ, according to the Apostle in I Corinthians 10:4, "For the rock was Christ." And this is more explicitly proclaimed in Daniel 2:44-45 where he says in his explanation of the aforementioned statue "The God of Heaven shall set up a kingdom, which shall never be dispersed, nor shall it be handed over to another people, but when these former kingdoms have been broken to pieces it shall stand for ever." Truly, this kingdom is none other than the kingdom of Christ and of his holy Church. Therefore, as I said, we shall deal with the kings of the aforementioned four kingdoms, when and for how long they reigned, in their proper places.

But of course, seeing that the Nimrodean history is the substance of this treatise, Nimrod was indeed the first king of the world, when he laid the foundation for the Babylonian kingdom. Nimus his son, following his father's example, was the first founder of the empire of the Assyrians. I thought it would be worth my while to list the successors to this monarchy for 1239 or 1240 years in sequence, following the best opinion of the chronologers (lest we seem to have omitted anything pertinent to our discussion) up to Sardanapalus, in whose time Jonah preached penance in Niniveh because of the notorious impiety of mortal men. Although the king accepted [penance], and by the works of penance averted the threatened overthrow of the city, it happened that afterwards, scorning these threats, he returned to his vomit and resorted again to the villainous state of life of his former life. Hence, according to the just judgement of God, he, being totally sunk in licentiousness and benumbed by wantoning with women and by pleasure, under siege by the Medes and finding no way of escape, raised a funeral pyre and in desperation flung himself upon it, together with his children, his concubines, and an inestimable quantitude of gold, silver and precious stones. With his death, the empire of the Assyrians was handed over by the general Artablis to the Medes and Persians under Cyrus. The table which follows shows the kings of the Assyrians, but we have decided to leave aside the kings of the other monarchies, as being irrelevant to our treatise.

Catalogue of the kings of the Assyrian Empire
who almost all, from Ninus to the last, Sardanapalus,
received the empire by blood inheritance

	Year of the World	Year of the Flood
Ninus		
Semiramis		
Zameis Ninias		
Arius, 2nd k. of		
Assyrians	2129	473
Analius	2159	503
Xerxes	2198	542
Abraham		

According to the Chronicle of Eusebius, the Assyrian Empire lasted 1239 years,
under 32 kings

**Chapter 3. The tower constructed in the city of Babylon about one hundred
years after the overthrow of Nimrod's tower by Ninus and Semiramis.**

Just as the ambitious passion and the arrogance of the human mind knows no measure, so also Ninus and Semiramis his wife, following the example of Nimrod and in order to present a spectacle of youthful magnificence and to acquire a perpetual glory and immortality for their name, built another new Tower. This Tower was not, as many think, built upon the ruins of the derelict Tower of Nimrod, but almost one hundred years after the division of tongues and the death of Belus in the city of Babylon of admirable and prodigious magnificent, the old city having been destroyed. It was not indeed of the same size as the one built by Nimrod, but founded on a smaller base, and as the illustration shows, it reached its maximum height, and was noteworthy for the great extent of its decoration. For it was made up of eight towers, of which the first (AB) was a full stadium in circumference, that is, 125 passus or 625 feet, and contained through its diameter $39 \frac{17}{22}$ passus, that is, almost 200 feet, and the height of the Tower was the same [i.e. one stadium, cf. below]. The whole mass was wound about by the rare and wonderful device, a helix or spiral by which one rose at such a gentle incline that men and pack-animals were able readily to reach its roof without difficulty. Moreover in [the Tower], seats were constructed at intervals with elegant craftsmanship to provide for those tired out by the climb both tranquil repose and a pleasant panorama over the whole plain of Babylon and the surrounding regions, to the very great delight of the spectators. The interior chambers were assigned to archives or food-stores or to other uses and public commodities. The other seven towers were similar to the first in terms of their symmetry, but following the laws of optics they decreased in height in proportion to their mass (?). For had each tower been equal to the one which preceded it, the whole mass of the tower would easily have risen to a height of 8 stadia, or 1000 passus, or one mile, and no foundation would have been equal to supporting such a huge mass, nor would such a great and rarified altitude have been able to withstand the blasts of the winds being supported on such a small fulcrum. Therefore as that the towers diminished according to proportion, the whole mass seemed to repose as it were following a certain law. Nor indeed was it able to remain that way, since according to that calculation to which I referred earlier, it could have been partially overthrown by a violent

blast of wind, as experience teaches (?) Here we quote the words of Herodotus, in which he gives an ingenious description of this tower [Greek text] "In the midst of the temple was a solid tower, a stadium thick and a stadium high, upon which another tower was imposed, and so on up to eight. Going around them on the outside were staircases, by which each of the towers could be ascended. In the midst of the stairways seats were constructed in which those who were climbing were permitted to sit and take their rest. In the last tower there was a shrine in which was a couch splendidly laid out, and facing it, a golden table." This is that celebrated tower which pagan authors could not praise enough, and which they placed amongst the seven wonders of the world. Hence I am puzzled not to find anything in Diodorus about this eight-level tower, unless perhaps he understood it to be the temple of Belus, which he described in these words: "In the middle of the city, Semiramis erected a temple to Jupiter Belus, whose size is recorded neither by the writers (because it existed so long ago) nor by any tradition. Nonetheless it is an established fact that the Chaldeans made their observations of the stars from it, looking now east, now west, because of its great height. It was built of brick and asphalt with consummate skill, and at very great expense. At the top of the temple she erected three huge golden statues of Jupiter, Juno and Ops [the personification of Wealth]. The one of Jupiter was 40 feet high and weighed 1000 Babylonian talents. Ops, of equal weight, sat upon a golden throne, and at his knees stood two lions, next to silver serpents of enormous size, each weighing 30 talents. The standing figure of Juno weighed 800 talents. All these shared a golden table, 40 feet long and 15 feet wide, weighing 500 talents, two libation-cups of 30 talents and as many steam vessels (?), each of 300 talents, besides three basins of gold, of which the one dedicated to Jupiter weighed 1200 Babylonian talents, and each of the others 600 talents. Later on the Persian kings carried all of this off, and the rest of the decoration was either consumed by time or destroyed by men." Herodotus says that the eight-level tower was erected within the Temple of Belus, which Diodorus does not mention. On the top of the temple, or tower, three statues were erected, but Herodotus only mentions one, together with the couch and table. I am convinced that this discrepancy could not proceed otherwise than from different readings or different accounts of ancient authors. More will be said below about the incredible abundance of gold in these first ages of the world.

Chapter 4 Concerning the city of almost undescribable magnificence which Semiramis built in Babylon.

The sacred book of Genesis says that Nimrod, before undertaking the building of the Tower of Babel referred to before, first constructed a city, of whose splendor the sacred text says nothing. Hence it seems plausible that the city was very crudely built, the houses being fabricated en route out of the same material which was used in erecting the tower. On the basis of this experience, they made marvellous headway in building more ambitious walls, towers and palaces, as it were exerting the strength of their sharp intelligence, and daily they turned their mind to inventing new things relative to architecture. This transpired, in order to leave to posterity (stimulated as they were by an ambition for glory), monuments of arrogant building which writers and historians both ancient and modern cannot admire enough. Such were the cities, Nimveh built by Ninus in Assyria, and Babylon by Semiramis, which seem to surpass what humans can believe about the wealth expended upon them, or the number of workmen, or the portentous construction of the structures. Lest I seem to say more than merits credence, I here add the words of Diodorus Siculus [Greek text] "After Nina had been destroyed by the Medes, at the time when they were conquered by the

empire of the Assyrians, Semiramis, a great-souled woman, desiring to outdo men by the glory of her creations, built a city in Babylon. Having brought together workmen and architects from all quarters, and after having made ready everything else which pertained to so great a work, she added, in order to finish this work, 2,000,000 men drawn from every region. The city was built on both banks of the Euphrates, so that it flowed through the midst of it, and its walls encompassed a circuit of 360 stadia, with numerous large towers. Such was the magnificence of this work that chariots with six horses could move abreast along the width of the wall, and its incredible height, as Ctesius Cnidius says, and Clitarchus as well, and as those who went with Alexander into Asia write, was three hundred and sixty five feet, and they add as well, that a stadium of the wall was finished every day for a year, so that its circuit contains as many stadia as there are days in the year. The walls, made of bricks and asphalt, were (as Ctesius Cnidius relates, 50 paces high. Other later writers say they were 50 cubits high, and their width was broader than that in which two chariots could drive." So much for Diodorus.

If this great and prodigious work were analyzed mathematically, scarcely anyone would be able to convince himself that the things which Diodorus relates out of Ctesius Cnidius are true. But because the issue is a most curious one, let us see whether 2,000,000 could be occupied in constructing a city. The wall, according to Diodorus, was 365 stadia around, and one stadium contains 125 passus, which is one-eighth of a mile. Now let us suppose that the thickness of the wall was 50 passus, and the length of one stadium is 125 passus. If you multiply these, it gives you the surface area of the wall in passus, so that if each man took a passus for himself, only 3750 could stand shoulder to shoulder on the surface of the wall (?). How, then, could 2,000,000 men? Diodorus adds that the circuit of the city was 365 stadia, which translates into 45,645 passus in circumference, one fourth of this is 11,311, and this number squared gives a surface area for the city of 160,881 square passus. If that number of men were to occupy that space, then in consequence neither machine nor cart nor pack-animal would find any place because of the packed crowd of men. Therefore if 160,881 men would cover the surface area of the city, how the 2,000,000 people which Diodorus says were occupied in building the city could have managed is anybody's guess. Unless we were to say that the craftsmen were employed outside the city, or that the work was farmed out. On this issue I find many absurdities in the translators, which clearly shows that the translators understand neither Greek arithmetic nor the art of building. But let us proceed with the history of the city of Babylon.

I shall explain what is meant by the mysterious construction of a wall of 365 stadia. It is a fact that after the building of the Tower, as Diodorus himself attests, the Babylonian and Chaldeans applied themselves exclusively to the art of observing the stars, either because the sky over Babylon was consistently clear and serene, or because of the height of the Tower. Now the year had been divided into 365 days by Noah and his sons (for Noah taught them astronomy, as we demonstrated above from Josephus). So greedy were [the Babylonians] for glory, that they divided the circuit of their wall, like the celestial circle or Zodiac, into 365 degrees, which were so to speak degrees (grades) upon which to display their memory to those who came after, and in order to present themselves as the inventors of astronomy. It is also probable that they inscribed what they observed day by day in the stars upon the bricks, as a sort of almanac, of which I find some trace in that very ancient writer Eupolemo, as quoted by Eusebius, who says that Abraham, when he was in Egypt, first taught the Egyptians astronomy. I do not deny that Abraham was skilled in astronomy, but I

cannot agree that he was its first inventor, since we have proven at some length in Obeliscus Pamphilus and in volume III of *Oedipus*, 'On the Astrology of the Egyptians', that long before Abraham the science of the stars was brought to Egypt by Cham, Misraim and Chus, and that it was wonderfully cultivated by Hermes Trismegistus, whom they therefore called Adris. To begin with, all the ancient writers, and especially the rabbinic experts, hold that Enoch, the seventh patriarch from Adam, divided the year into 365 days and the zodiac into 12 signs. The Rabbis add that the said Enoch (as the sacred book of Genesis states), since he lived 365 years, and through all those centuries kept close watch upon the stars, was caught up into heaven after a space of 365 years, and walked with God, whose admirable works he had so assiduously observed. They say that Enoch transmitted what he had learned from Adam to his son Methuselah, which things were then communicated through Lamech to Noah, who (as we said above) taught his sons Shem, Ham and Japheth the laws of astronomy. Through him and through his sons, these things were left to posterity. Hence, it is plain that Nimrod and Ninus and his wife Semiramus learned this from the teaching of their parents Ham and Chus, and the wall of the city which Semiramus founded, 365 *stadia* in circumference, refers plainly, by a mystical significance, to the 365 days of the year. This art of investigating the stars, transmitted thereafter by Ham to Egypt, quickly made great progress, so that there was virtually no nation thereafter which did not take the elements of astronomy from the Egyptians, as we have discussed in our *Oedipus*. Both the golden circle in the temple of Osymandrus, divided into the 12 signs, and the famous quadrant of the *Tabula Bembina* together with other instruments for measuring the stars, are widely attested. The Syrians also say that Jonathan, son of Noah, a man preeminent in astronomy, having been sent by his parent to Ehtan in the land of Canaan to found new colonies, first taught the peoples subject to him the necessary arts, and then the astronomical science he had received from this parent. They say that Abraham, amongst others, was taught by him, and that afterwards (Abraham) taught the Egyptians, although the transmission of this knowledge ought more correctly to be ascribed to Ham, Misraim and Iautus, that is *Mercurius Trismegistus*. But these few remarks suffice to explain the mysterious structure of the wall of Babylon, divided into 365 *stadia*, and corresponding to the 365 days of the year. Now, as is wont to be said, to the quadrilateral measure.

Now according to Diodorus, there were in the said wall 250 towers, whose height and breadth matched the magnificence of the wall. Diodorus says that the reason why only 250 towers were founded was because there were many swamps surrounding the city, these prevented any approach by an enemy, so that the city would have been adequately defended without any towers being constructed. But if I may be permitted a conjecture, I would say that not just 250 towers were built, but as many as there were *stadia* in the wall, that is, 365, so that the towers might serve as termini to each of the *stadia*, marking them out. In the course of time, because of the marshy ground and the weakness of the foundations, which were unable to sustain the mass above, they either collapsed or sank, as experience teaches, and the rules of the art of architecture prescribe. Whether the rest of what Diodorus and Herodotus tell us about the building of this city is true, we (albeit of the opinion that it was a large and splendid structure) consider ought to be investigated by mathematical calculation, lest anyone accuse us of adding to these things through credulity. First, Diodorus says that 2,000,000 men were summoned by Semiramis to build Babylon, and that the walls which surrounded Babylon were 365 *stadia* long, which divided by the 4 gives 91 *stadia* on each side of the city, which Herodotus says was square.

Multiplied by itself, 91 gives 8,281 square *stadia* as the area of the entire city bounded by the walls, as is evident in the illustration which follows. Let us give one *pavus* to each of the 2,000,000 workmen, then let the impartial reader judge how it could be said that 2,000,000 workmen were occupied in the constructing so many houses, buildings, towers, palaces and temples within this area, without impeding one another.

Chapter 5. The bridge and the two royal palaces at opposite ends of the city constructed by Semiramis

Concerning the marvellous structure of the bridge which Semiramis erected over the Euphrates, which flowed through the midst of Babylon, let the reader hear what Diodorus says about it, and about the two royal palaces constructed on opposite sides of the city. "These walls having been finished with the greatest care in a single, (Semiramis) constructed a bridge at the narrowest point of the river, five *stadia* (that is, 625 *pavus* long), its columns being set into the river bed with consummate skill at intervals of 12 feet. She joined the stones of the edifice together with joints made of shafts of iron mixed with molten lead. In front of the columns, in order to cleave the onrush of the water and check the course of the river, she set up solid wedges, by which the columns were protected from the water which flowed around them. She constructed the bridge which was 30 feet wide, from cedars and cypresses (rest of sentence unintelligible). On either side of the river was a wall 360 *stadia* long, and equal in width to the city walls. She built two royal residences on the riverbank on either side of the bridge, these provided a broad panorama over the city, and were, so to speak, bulwarks for the city, as the Euphrates flowed through the midst of the city towards the south. One palace faced east, the other west, and both were constructed with extensive triple walls around them. On the interior wall of one palace, constructed of unbaked bricks, various living creatures were depicted even as they are found in nature, each according to their own colours. Its length was 40 *stadia*, it was 300 bricks wide, and its height, as Ctesias writes, was 50 *pavus*. The height of the towers rose to 70 *pavus*. There was also a third inner circuit which contained a citadel, 30 *stadia* in circumference. The height and width of this edifice surpassed that of the second wall. On the towers and walls were images of diverse animals, depicted naturally both as to form and colour. As well, there was a hunting scene showing every kind of animal, whose magnitude exceeded four cubits. Here Semiramis could be seen spearing a leopard from her horse, and at her side her husband Ninus, striking a lion with his spear. She also erected three gates, above which were placed various ornaments in bronze. This royal palace was superior both in size and decoration to the one situated on the other side of the river. Its walls, 30 *stadia* in circumference, were made of baked brick, and instead of animals there were bronze statues of Ninus and Semiramis, of governors, and also of Jupiter, whom the Babylonians call Belus. There were also depictions of battles, and various hunting scenes to delight the eye. In the lower part of Babylon she dug a lake, whose sides were lined with baked brick and asphalt. (each side) was 200 *stadia*, and it was 35 feet deep, and it was filled with river water diverted in by the royal canal. From furnaces constructed of baked brick, asphalt was introduced on either side to a thickness of four cubits. The walls of the canal were 20 bricks wide, and they rose 12 feet above the furnaces. The work being completed in seven days, the river returned to its previous course. On either side of the canal, she set up bronze gates, which survived until the reign of the Persians.

Chapter 6. The hanging gardens constructed by Semiramis in the plain of

Babylon, which are counted amongst the wonders of the world. A description of each of their parts.

So daring was the spirit of Semiramis, and such the ardor of her ambitious heart, that it seemed she could not rest until she had at least equalled, if not surpassed, the glory of her husband Ninus by the fame of her incredible feats. To begin with, she was responsible for the surrender of the city of Bactria, and consequently of the whole kingdom of the Bactrians (concerning which, see Diodorus bk. 1, ch. 3). Ninus, admiring her spirit, which surpassed any other of womankind, made her his wife. Under Ninus, the emperor of the primeval world, the empress Semiramis -- a man beneath her female sex -- being indued with a martial spirit, not only did things which surpassed her feminine condition, but accomplished such difficult, sublime and truly (') deeds that, if we credit the truthful accounts of the writers, she seems to outstrip by many leagues the fame of all the heathen women and mighty heroines who came after her. Since we dealt earlier on with the eight story tower and the city of Babylon which she built, it remains now to describe her hanging gardens in like manner.

Diodorus says in Bk. 3, Ch. 4: "There was a hanging garden near the citadel, built not by Semiramis, but later on by a certain Syrian king in order to please her." To be sure, almost all the ancient writers assert that what Diodorus wrote here was wrong, since it is to be believed that this was the sole work of Semiramis. This king of Syria was very prominent at the court of the Queen, and she honored him with such signal favours that he also took it upon himself to construct hanging gardens. Accommodating himself to the spirit of Semiramis, whom he knew to be alive with the love of things unheard of and audacious, he seems to have persuaded her to construct for her own pleasure gardens containing every kind of flower, plant and tree upon the roofs of her palace. Diodorus describes what this structure was like in these words: "The sides of this garden extended for four *juga*. One ascended it like a mountain, the buildings being constructed one atop the other, so that it afforded a view far and wide. Vaults were constructed in the foundation which held up the weight of the whole garden. Vaults were build upon vaults in ever increasing magnitude. The uppermost (vaults) in which the surface of the walls of the garden were contained, reached a height of 50 feet. They (the vaults) were 12 feet wide, the thickness (of the wall between the arches) was only 22 feet. On these were laid stone beams 16 feet long and 6 feet wide. Over these were spread as a pavement reeds bound together with asphalt, and above these a double layer of baked bricks, set with gypsum. Thirdly, there were lead strips to prevent humidity from leaking through to the vaults. Above these were receptacles for water, from which moisture flowed. On this pavement was packed earth deep enough for the roots of large trees, and here the garden was constructed. Majestic trees of every species made an agreeable spectacle therein. The vaults also provided each other with such light, that the royal lodgings were contained within them. Moreover, a hidden aqueduct irrigated the garden." So much for Diodorus. Since this description is somewhat obscure, I have decided to place before my reader's a perspective drawing, following the exact tenor of Diodorus's words, so that the true form of the building might be conceived.

Explanation of each of the parts

The square structure of the whole garden contained in its circumference 46 *juga*, so that each of the sides extended for four *juga*. I let us explain what is to be understood here by *jugum*. As measurements for things were invented on

diverse occasions, so also it is difficult to ascribe to them a sure and determined measure because of the variety of measurements which different nations use. Sacred scripture says that a *jugerum* is one-half of the field which a pair of oxen can plow in a day, as the Hebrew text has it, a half-acre, which a yoke of oxen might plow (I Sam. 14:14), and Pliny agrees with this. Indeed, just as the day is not always allotted 12 equal hours, but the quantity of hours varies due to season and latitude, here also it is not possible to determine this doubtful matter with exactitude. Hieronymus Mathematicus says that it contains 200 feet, Quintilian says that it is 200 feet when measuring a length, but half that amount when measuring a width. Varro says in Bk. 1: "A *jugerum* is two square *actus*; a square *actus* is 120 feet wide and 120 feet long." Diodorus rightly here did not take the surface area of the garden to be one *jugerum*, but only the length, hence it is plain that the circumference of the garden having been set out as a square, he understood the length around the four sides as four *jugera*; one Babylonian *jugerum* was 200 feet. Since therefore one side of the garden contained four *jugera*, and one *jugerum* equals 200 feet, one side was, without doubt, 800 feet long, which reduced to *pavus* give us 160 *pavus*. This yields one stadium. Therefore each side of the garden was 800 feet or 160 *pavus* long, which gives one stadium and 35 *pavus*. If we square this number of feet, it gives 640,000 square feet as the area of the whole garden.

Within this circuit were four areas, each 400 feet in length: ABPX, PXIM, LMNO and NODI. The first was elevated 12 cubits, or about 36 palms, above the ground, the second, PXIM, was 20 cubits or 60 palms high, the third LMNO was 37 cubits or 3 palms, the fourth, the one closest to the Euphrates, was 50 cubits high, that is 180 palms. Within this area, plants, flowers and trees of every species were to be seen, set out in quincunx, and pleasant peridromes in topiary were arranged to produce shade. Charming prospects of gushing fountains were not wanting, the waters were pumped up from the Euphrates by hydraulic machines, both to work the fountains and to water the garden. And this whole structure was held up on brick vaults intersecting the walls, cohering one to the other by close and firm bonds according to the proportion of the surface area: each arch or vault had a diameter NO of 12 feet, and the arches were spaced 20 feet apart, as one can see at OP. This astounding structure underpinned the upper part of the garden: it was so adorned with intersecting vaults, that although it was divided into various chambers, each chamber received ample light either through the entrance arch or through the windows. These were calculated in proportion to height in the rest of the areas or storeys on the first, second, and third level. Lest these storeys be damaged in time from the air, they were faced with large stones, 16 feet long and 4 feet wide, which were roofed first with reeds and then with great strips of lead lest the storeys or the substructures be damaged by humidity from the earth. This (humidity) was carried off by oblong canals and pipes.

On the upper storey, covered in the fashion we described above, the best and most fertile earth was piled up to a depth which permitted the trees to extend their roots easily and without impediment. Strabo describes the gardens in this wise: "When the workmen saw that the trees which they wished to plant on the uppermost storey would not have sufficient earth, they left all the columns of the substructure, which he calls 'ankle bones' empty on the inside, and filled them with earth and clods, so that the roots of the trees planted above, gradually working their way down into these columns (constructed as square prisms (cylinders)), might hold firm." Diodorus adds that in order to irrigate the garden, water was diverted from the Euphrates by hidden channels, which artifice could be

none other than that by which, by means of a treadmill water was raised up to the flanking towers, and hence dispersed by siphons for various purposes

The first and lowest storey was so constructed that one ascended to the second storey by means of staircases, and thence other stair-cases lead to the third and topmost storey, although Diodorus makes no mention of these stairs, the rules of architecture dictate that they must have been built. The windows indicated by the letter R were so many apertures through which one had a view of the several areas. And so this is that sumptuous structure of the hanging gardens, which we deemed ought to be presented before the eyes of the curious reader in this illustration, drawn from the description of Diodorus with no small degree of effort. Although I pondered these writings of the ancient authors very closely and with great application, I found many things which were not consonant with truth, nor was I able to conceive the symmetry of the total structure save by another way, through presenting the mass before the eyes of the curious reader in all its variety of chambers, arches, peridomes, halls, gardens and fountains, expressed according to the laws of optical projection. This is what we have furnished in the present illustration, in which, apart from the optical projection, one can see almost exactly the same thing as is shown in the preceding picture.

Chapter 7. The astounding marvels of the constructions which the brothers of Nimrod, Misraim (and his nephews within the same family) and Chus erected in Egypt in emulation of, and in rivalry to, those of the Babylonians and Assyrians

Chus and his sons Misraim and Nimrod, and their progeny lived together in Babylon after the division of tongues. When Nimrod the mighty had gained control of the Babylonian empire either by luck or by tyranny, his brothers and their sons were astounded at the greatness of spirit, the skill in raising the immense edifice of the Tower, and also the glory of Ninus in conquering kingdoms, as well as the incomparable vastness of the city which he founded in Assyria. As time went by, the proud and prodigiously magnificent monuments erected in Babylon by Semiramis drove them with inflated ambition to acquire an immortal name for themselves through the magnitude of portentous building projects. Immediately after arriving in Egypt, which had fallen to them by lot as a colony, they undertook things by which, if they did not equal their Babylonian relatives, they would at least not be inferior to them. Above all, they followed the example of Semiramis, whom they knew had constructed in Babylon a mausoleum or pyramid of unheard size to the eternal memory of her husband, as described above, and also set up an obelisk larger than any ever seen thereafter in the main plaza of Babylon, to the incredulous astonishment of all who saw it. Impelled by these great structures, which they had seen themselves or learned about from the accounts of others, they themselves filled all Egypt with pyramids and obelisks, as well as statues, shrines, labyrinths and buildings surpassing human belief, and they produced things which no human power has since been able to equal. What these were, albeit we have already described them at length in volume III of *Oedipus*, I have decided nonetheless to describe them once again briefly here. But first, why out of the three tribes of Shem—Ham and Japheth did only the offspring of Ham, although it lay under the curse of God, nonetheless execute such stupendous works in the course of time? Why do we not find the tribe of Japheth, although it was devoted to God, producing any of these things? By the same token, why do we not read that any of the patriarchs before the Flood left behind any singular monument, save Cain, who was also cursed by God. For it is noted in Genesis that he was the first of all to build a

vast town, a city of giants, which the sacred text names Enoch. Since the cause of these things depends upon the secret judgement of God, it would be impious to understand it by the stratagems of the human intellect. We can say only this: as Shem and Japheth were chosen by God, so also were they scorned by all the others. In this one thing they were consistently true to the concern of their pious parent, that they should fill the earth through their sons and grandsons with ever new habitations and newly-founded colonies. But the family of Ham, cut off from the holy tribe, and given over to idolatry, had only one intention: to win divine honors from posterity by the unheard of, never before seen and insane structures of their buildings, and the size of their works. Since all these things have been very fully treated in our *Oedipus Aegyptiacus*, we refer the reader to this book. There remains but for us to adduce some demonstration of these marvellous works and the prodigious character of the grandeur of all the deeds which excited the admiration of the world which followed after, done by the race of Ham alone, to whose lot fell both the land of Babylon and Egypt. Let us begin with the pyramids.

SECTION III. The prodigious constructions of Egypt, which the descendents of Chus erected in emulation of their relatives Nimrod, Ninus and Semiramis in Babylon, to the stupefaction of the whole world.

PREFACE.

Chapter I. The pyramids and obelisks erected in Egypt.

How great was the magnificence, the splendor and the grandeur of the pyramids erected by the kings in Egypt can be gathered *inter alia*, from the fact that the writers with one accord numbered them amongst the wonders of the world, after all the regions of the world had been crushed by the arrogance of the Romans. Although in various places in Egypt one could see these defiant structures like towers nevertheless those of Memphis were the most admired, and considered marvels of the world. Herodotus, who according to Pliny lived about 300 years before the foundation of Rome, first bore witness to them in Europe (= before the Muse), saying: "This pyramid took 20 years to build. Each of its faces was clad in stones, joined together with great finesse, none of them less than 30 feet square. This pyramid was constructed in the form of steps, which some call ladders, others alters. Coming 400 years after Herodotus, Diodorus, who saw them with his own eyes, describes them in like manner: "Chemis (whom Herodotus calls Cheobus), the eighth king of Memphis, reigned 50 years, and built the greatest of the three pyramids which are numbered amongst the seven most famous works. This pyramid looked towards Libya. It was 120 stadia from Memphis, and 45 from the Nile, and its height surpasses six *jucera* (the width diminishes gradually towards the topmost point, and contains 1565 cubits. The whole structure is made of hard stone, difficult to work but lasting forever. This structure has remained intact for a thousand years according to some, and according to others more than 3400 years up to our time. They say that the stone were brought from Arabia by a long journey. It was built by means of earthworks, machines not having been yet invented at that time. This marvellous work, particularly since it is constructed on sand, where there is no trace of either earthwork or dressed stone, seems to be a structure built by the gods rather than by men. The Egyptians endeavour to tell the story that the earthworks were made of salt and nitre, and dissolved by the flooding of the Nile, thus disappearing without human labour. But this is a long way from the truth, for the earthwork was both constructed and dismantled by a great crowd of men. For they say that

360,000 men were assigned to this work, which took 20 years to complete. Then he describes the second pyramid erected by King Chabreo, similar in structure to the first but not its equal in size, as one might expect since the side of each of the faces were only one stadium long. The expenditures are said to have exceeded all the money spent on the first project, 1600 talents of oil and grain. King Myzerinus built the third pyramid, but being prevented by death he was not able to finish his work, and indeed, one may be allowed to admire more the supreme ingenuity of the architects than the idle display of the wealth of the kings. Almost at the same time as Diodorus, Strabo in book XVII recalls these structures. Forty stadia from the city of Memphis is a projecting escarpment on which stand many pyramids. Three of these are memorable, two are counted amongst the seven wonders of the world, all are one stadium high, square in shape, having a height somewhat greater than each side and somewhat exceeding it in mass. And a little later. The third is on the top of the other mountain it is much smaller than the other two, but was constructed at greater expense, for almost from its foundations up until past the mid-point it is made of black stone from which they make mortars, and which is quarried in the most constant mountains of Ethiopia. Since it is sumptuous. It is the tomb of the courtesan Rhodope, or Doricha. Pliny, weighing these matters more precisely, says this, amongst other things. in book 35, ch. 12 (of his *Natural History*). They say, by the way, that the superfluous wealth and foolish ostentation of the kings of Egypt built in order not to leave wealth to their successors to foment jealousy and treason, and so that the common people would not be idle. Great was the vanity of these men in this matter, and the traces of many things begun by them remain. One is in the nome of Arsinoe, two in Memphis not far from the Labyrinth, of which they say are pre-eminent. The other three, which fill the whole earth with their fame, as they are clearly visible to sailors, are situated in a part of Africa (i.e. on the Africa side of the Nile), on a barren rocky mountain within the fortress of Memphis, and which we said was called Delta, less than four miles from the Nile and six from Memphis, facing the village they call Busiris, from which they are wont to climb up to the pyramids. And a little later. But the biggest pyramid is built of Arabian stone, and they say it was constructed by 360,000 in 20 years. And further on. The biggest pyramid is 8 *juga* at the base of the four corners, at equal intervals 883 feet on each side, the altitude being 25 feet from the top. So much for Pliny. And although the authors quoted agree as to the site, there is scarcely one who is in accord with another about the measurements: this happened, because of the different systems of measurement used by different nations.

To these are joined the modern measurers of the pyramids, of whom Petrus Bellonius rightly holds first place, having gone to Egypt in order to measure the pyramids, he says. The pyramids of Egypt celebrated by the ancients are situated on a height of land, and start to become visible more than 40 miles off. The Egyptians call these Pharaohs. And indeed they seem more admirable when viewed close up than in the description of the authorities. For of the Romans and the works of antiquity cannot rival the splendor and magnificence of these pyramids. They are situated in a very deserted place or solitude, four miles from Cairo, three stones throw beyond the Nile. The biggest of them surpasses the others in excellence, and all the ancient writers say that it is marvellous to behold. It is constructed in projecting external steps, and each side has 324 *pavus*. From base to peak there are 250 steps, the height of each is five foot-paces, the length 9 inches, and this edifice is of such vast width that the strongest and most skillful archer, standing on its peak and shooting an arrow into the air, would not be able to project it beyond the base of the structure, but

it would always fall on the steps. The peak ends in a flat space 2 *passus* in diameter, in which 50 men might stand. The other two pyramids are of immense size, but much smaller than the first, and the smallest of these three is one third bigger than the one near the Mons Testaceus in Rome. Apart from these three there are many other smaller ones scattered hither and yon in the sandy soil, more than one hundred, of which not one appears as damaged as the Roman pyramid. So much for Bellonius. This just about agrees with the account of Marcus Grimanus, bishop of Aquileia and afterwards cardinal. Being an eager student of ancient history, while he was in Egypt on behalf of the Venetian merchants, himself measured the pyramids, climbed them, and penetrated within them. He says: "The correct measurement of this pyramid is in intervals of *passus*, whose magnitude is thought to slightly exceed the measure of three ancient palms. Each of the four sides of the base contain about 270 *passus*. The whole pyramid is made of re-used and very hard stone, and its steps are extended to a sufficient length, and are so adapted and disposed to the whole work, that they afford a way of climbing to the very top, albeit it is difficult and uncomfortable. Each of the steps is about three and one-half palms high, nor do they everywhere reach the flat space at the top, so that the footsteps of climbers can put their weight upon them safely and comfortably. From the base to the peak there are about 210 steps, and moreover each of them is of such a height that the height of the whole structure seems equal to the width of the base which supports it." But I find that the most complete and accurate observation of the pyramids is that of Prince Radziwill in the account of his pilgrimage. (End of translation)

Chapter 2. The shrine built out of a single stone

Chapter 3. The astounding construction of the Labyrinth in Egypt

Chapter 4. An exact description or iconography of the Egyptian Labyrinth, which surpasses human capacity, and which the kings of Egypt who succeeded Ham erected with marvelous skill at Lake Moeris.

The labyrinth is built by the same architects that built the seventh wonder of the world as attested by the Greeks Babylonians and the Romans

The upper Labyrinth

Survey of objects contained in the Labyrinth

Chapter 5. The date when this great work was constructed. (Paraphrased Notes)

The monument of Egypt erected in rivalry to those of Babylon. Invention of writing by Hermes Trismagistus, to encode the theological mysteries he had learned from Shem and Ham.

Chapter 6. The artificial machines constructed in the Labyrinth in order to strike terror into those who might enter in. (Paraphrased Notes)

Automata activated when intruder stepped on paving stones. Statues would emit horrible noises and arms would grasp the intruder. Some rooms were constructed to make a single voice magnified to sound like an army. This would confuse intruders and cause them to loose their way. The statue of Memnon would emit harmonious sounds when sunlight fell on it. Other simulacra are further described.

in *Oedipus*

Chapter 7. The Labyrinth constructed in Crete, Lemnos and other locations in Greece after the model of the Egyptian Labyrinth.(Paraphrased Notes)

Daedalus constructed a much reduced copy of the Egyptian labyrinth in Crete and Lemnos. A hypothetical reconstruction of the Cretan labyrinth, based on mathematical projections of Christopher Grienberger. Kircher speculates that Daedalus's labyrinth must have been round rather than square, apparently that shape could accommodate the number of turns and deviations necessary to produce a truly bewildering labyrinth within the confines of the space provided. Apparently the Egyptian labyrinth was so much bigger than the Cretan labyrinth that the clue of Ariadne would have been bigger than anyone could have carried.

Chapter 8. The figural interpretation of the Labyrinth.(Paraphrased Notes)

Ancients interpreted the Labyrinth as symbol of the perplexities of human life and lineage. Kircher's three inextricable errors of human life:

1. The ambition of the greedy
2. Greed of the mighty
3. ?

He offers an allegorical/moral reading of the labyrinth and the Minotaur. The contempt and disdain for all things human, and trust in God, are the "clue" that leads one out of the labyrinth.

Chapter 9. Of the bold constructions and monuments which at one time were erected in Greece in emulation of the Egyptians.(Paraphrased Notes)

1. The Temple of Diana at Ephesus

Temple of Diana in Ephesus. Its dimensions, statues etc. Not to be compared with those of Egypt. It was built on a swamp to make it earthquake proof, but its architect Ctesiphon underpinned it with coals and sheepskins. (Pliny's description)

2. The Mausoleum of Artemisia, queen of Caria.

The Mausoleum of Artemisia, Queen of Caria (at Halicarnassus) built for her husband Mausolus. All royal tombs and monuments are called Mausolea after this one.

3. The Colossus of Rhodes.

Built in imitation of monumental Egyptian statues. Stood for 56 years before being destroyed in an earthquake, but even ruined fragments were said to be impressive. When the Sultan of Egypt captured Rhodes, he looted the bronze. Disputes various arguments covering its dimensions. Various other colossi were erected elsewhere, but the prototype was the statue in the Egyptian labyrinth. Colossi in Rome as described by Pliny.

Chapter 10. Can any traces of Nimrod's Tower be found today?(Paraphrased Notes)

Kircher reflects on the vanity of builders of these ancient monuments, and on the mutability of all things human. Nothing lasts forever, everything falls into ruins. Not only have none of the monuments of ancient Babylon survived, but we can not even be certain of the site of the city. Kircher reviews testimony of various

ancient and modern writers who claim to have seen ruins of Semiramis's constructions. Kircher, however, lends credence to the arguments of his friend Petrus a Valle. Ancient Babylon is in fact modern Baghdad, or that matter, the ruins of old Babylon lie just downstream from Baghdad, and can be visited to say, and which, according to local Armenian Christians, contain ruins of the Tower of Babel. This seems likely because there is plenty of pitch and material for constructing bricks in the region. Petrus a Valle's eye witness account of a visit to ancient Babylon and the Tower is given: he describes it as a square structure, like a pyramid, and oriented to the four corners of the world. Apart from the Tower, there is almost nothing of the city left. The Tower is extremely dilapidated, and little evidence of its original size or form survives. Petrus collected some of the bricks from the Tower, which he donated to Kircher's museum. Kircher then quotes a passage from the Itinerary of Benjamin of Tudela, describing his visit to Babel.

Chapter 11. The cities founded either by Nimrod, or by Ninus and Semiramis, on the banks of the Tigris and Euphrates, and the traces of these which survive. (Paraphrased Notes)

Nimrod ruled over four cities: Babel, Arach, Achad and Cama. Scripture does not say where these cities were, so Kircher guesses that they were near Babylon, on the Euphrates. Orpha is on the site of ancient Ur, Mussal on the site of ancient Nineveh etc. At Ctesiphon or Selencia is the palace of Nebuchadnessor, the lion's den into which Daniel was cast. Quotation from Petrus a Valle describing his visit to these places, especially to Ctesiphon (Alvan Kesra), where he sees the palace and the Lion's den, and to Baghdad.

Chapter 12. The genealogy of Noah, and of his sons Japheth, Ham and Shem. The birth of Phaleg, and the division of languages and peoples. (Paraphrased Notes)

The birth of Peleg and the confusion of tongues. Various errors in chronology of post-diluvian period are discussed. Kircher's revised chronological table. Why the confusion of tongues was a just punishment. Was it a confusion of tongues or a division of tongues? Various opinions are canvassed. Kircher's is a compromise position based on a comparative philology: since some languages are clearly of the same family, these must have been divided, but since there are mutually unintelligible families, these must have been confused. How many languages? Traditionally, 72, but languages are difficult to classify this way. Kircher defends the traditional number. Why did Nimrod not continue to build the Tower after the confusion of tongues? Either there were too few people for the task, or people were too terrified to continue. Indeed, there was a 100 year hiatus before building began again under Semiramis.

Chapter 13. When the rule of Nimrod began, and the division of the peoples.

Chapter 14. The descendents of Chus, and whether they were really black-skinned.

Chapter 15. The reign of Nimrod; his impiety, and why he was called Belus.

Nimrod is the Sixth son of Chus and at the same time the Grandson of Ham. The first king in the region of Shinar and his reign began the great building enterprise of all the cities of his empire with the head in the city of Babylon.

In referring this to the writings of St Augustine Book 16 Chapter 3, The state and lineage of Nimrod is far greater than just the city of Babylon alone. His state included among Babylon, the Kingdoms of Erech, Accad and Calneh in the land of Sennar out of which emerged Assyria where we find the city of Nineveh. After the division of tongues is when his state expanded into the plains of Shinar into the aforementioned kingdoms. Nimrod was as well commanded to disperse into the world with everyone else.

Alternative sacred scripts, as indicated, mention as well the cities of the plains of Shinar as following the first reign of the city. tacitly indicate, exactly the post repeatedly the powerful rule over many cities. This is to be held as the truth according to the texts.

Thirdly is, That no other reign is mentioned along with Nimrod's at this state. He is according to the Hebrew text implied as the first to rule over the above territories. Thus to say of the reign. Of especially Nimrod's reign was not rejected? Even though after the flood there were more than one singular principalities, which consisted of various nationalities. The condition of control in the plain of Shinar rested with the rule of Nimrod. The understood truth of the reign of principle was not of a natural principle, led to a common acceptance of the acceptance of the rule of tyranny, in the foreign nations and cities, no other concerned body.

He was the first to behave like a tyrant by occupying foreign cities and in general behaving in this way by crushing whatever competition that he met. Nimrod is the first (or the first to call himself a) tyrant. For he is the first to invade and conquer alien territories and impose his own language and custom. Quotes B. Hieronymus. And as well S. Isidorus Book VII Etymologiarum.

It is his rule following the diversion of tongues to impose the tyranny of language. At least after the flood. As far as the historical documents and sacred text go. His rule extended to even the farthestmost regions to impose and subjugate peoples to his language.

Nimrod's Character. Speculates that not only was Nimrod Physically robust, but as well bold in his thought. Most avaricious and greedy to dominate others. Consequently, He was the most cruel and bloody of men, impious and rapacious. This is typically evident from the picture or portrait which is subjoined to this chapter. Hence all of those who follow him or imitate them show themselves as defiant of human and divine law and consequently pervertedly violate it for the sake of ruling. And from them they have taken the names not of kings but of tyrants. Nimrod according to Hugo de S. Victore in his annotations to The book of genesis considered him to be the greatest of all idolaters, and in so doing subjecting his entire population to his idolatry. He was the first to introduce idolatry into the world. He was superior to other men in both the size of his body and his powers. In other words he was a giant. He exercised his power through violence. He induced men to idolatry and particularly to fire worship, the worship of fire and the sun. This led to the religion of Zoroastrianism as the god that were later emerge from this in the cultures (as an error) to the Persians and the

Chaldeans Hence he did injury to both god and man Why ? Because he withdrew the worship from god which was due to him And, to man because he oppressed him with an unjust dominion and seduced him into error Quotes from Isodorus (Lib XIV) and his work Etymologiarum

Nimrod sinks away or settles into, within Persia ignites within the Mithraic ritual of animal sacrifices He studied and perpetuated this religions of false gods

Why Nimrod was called Bel And as well the confusion over his relationship and identity with his son (or so we believe) Ninus How is this Diversity accounted for It is certain that Berossus in his *Anno* translates Nimrod as that personage of a profane saturnian nature of many of the scriptures, attributed to Belus and his practices (or his State) that Ninus is often confused with Gerardus Mercator, in his *Chronologia*, affirms that Nimrod is Himself Ninus as Berossus in his *Anno* implies ten years later that there is a diverse opinion of the true nature of this character And so many of the scriptures are in total contradiction over this matter See the *Peternum in Lib XV commentarium* and in *Genes num 64* where is the best argument for to this idea, for the many ecclesiastical authors =, and Josephus Nimrod is of a strongly Bellicos nature, and the first and original of the kings and city masters who humiliated and subjugated with great ease, at least this is the sort of nation (or culture) in which Ninus is placed within history at this point convenes Responds (or returns) with a multitude of magicians congruent with Belus that most authors seem to pursue The held *Mercatory* view held contrary is confirmed by B Heiron, Super cap II Osea, Eusibii in *Chronico* Following these two accounts it is clear by their judgement that Belus was the first king of the kingdom of Assyria in Babylon, and at the same time the Rabbinic text says that Nimrod - Bel', the father of Ninus, who built Nineveh Eusibius in Bk IX, de preperatione evangelica, and in his *Alexandro Historico & Eupolemo* contend that the first to reign in Babylon was Belus Thus in the sacred texts, Nimrod becomes Belus by right of their coincidence in their identity as the first rulers of Babylon Thus in all the texts, ecclesiastical, sacred and profane the truth is arrived at the result of which the antique scripts clearly convene, so liberally we would follow, extending the dept of thinking To the chapter, Saturnum & Belus & Nimrod are one and the same Then the consequence, is that Ninus and Belus are not divergent So for what reason again was Nimrod named Belus, we need a more inwardly exploration to this question again perhaps the reason for this is due to the impure sex (impuro cotu) that he practiced without discrimination See the *Guidonem Fabricium in Dictionario Syro - Chaldaico ad vocem* Perhaps as well he was called Nimrod at his birth as for the robust strength of his body, But afterward when he grew up and began to exercise tyrannical power and because of his profane libidinous practices he came to be called Bel Thus we probably see that the first name of Nimrod, that the prophets believe that it engenders as is given to the son Nimrod as symbolizing the tyranny of the world is introduced with this name thus we see in the manner that we have presented this name that it is not as it has originally as it had at first seemed In the *Baal Hatturim* says that Nimrod (now under the name of Baal) is the first to institute the cultural basis for the adversaries of the Hebrews, Baal The majority of the of the Syrian, Hebraic and the religious texts seem to indicate that bal is usually used to discuss the nation state in Babylon The question that now arises, that is there a universal presence of these implications in all of the other languages ? There is evidence when we look at the Syrian goddess Baltis as the equivalent to the goddess *Venus*, who is ironically and predictably the goddess of love As with the city of Babylon it is entirely predictable that there would be confusion over its proper name following

the confusion of tongues. But one thing that is clear is that the etymology of the city's name sake is related to Bal.

Chapter 16. The settlements of the sons of Shem, Elam and Assur.

Chapter 17. Whether the Hebrew tongue survived in the house of Heber after the confusion of languages, and how.

The debate over whether the family of Heber, Hence the culture of the Hebrew language, forms part of this confusion of tongues. Was the language of the Hebrews one that emerged from the confusion or did it survive in its pristine form from beforehand? The debate seems to hinge on whether *Peleg* and *Heber*, the ancestors of the Hebrew people, took part in the construction of the Tower of Babel or not. Some say that, in fact, they stood aloof from this out of disgust at Nimrods doings, while others say that they did participate. They were punished along with the general punishment of mankind in the confusion of languages. But they were punished in the sense that they also could not understand other languages. There are two aspects of the confusion of tongues, one in which the first language is divided into other languages, while the second aspect is the condemnation to mutual mis-comprehension. The Hebrew people like every other people on the face of the earth suffered from mutual incomprehension, they themselves couldn't understand other languages. However that that does not mean that the Hebrew tongue is just another language that emerged due to the event of the dispersion, on the contrary, The Hebrew language is an original tongue of mankind and it did survive in the language of *Heber* and *Peleg* because they refused to participate in the construction of the Tower of Babel. They were not part of the building project, in fact they rejoiced to see the punishment being meted out at the wrongdoers by God. The family of Heber belongs to a sacred genealogy. The sacred language survives in the family of *Heber*. Eventually it is passed on to the lips of Abraham. And it is from the seed of Abraham that Christ is eventually born, the language is passed down through a continual series through the family of Heber and Abraham to Issac to Jacob etc. There is a correspondence to the nomadic nature of the people, a dependance the language rather than power, physical construction and of war.

However as every other institution of time in the world the Hebrew language through time underwent corruption. There is a distinction between the Hebrew language as it now is and what it was in its original purity. The Jews and their culture endured a great deal of disruption having been dragged off into captivity on many occasions, where their language became mixed with other cultures, thus it distinguishes itself considerably from the modern practice of the Hebrew tongue. The Hebrew of the ancients should not be identified totally with the language that is spoken now. The historical degradation of the Hebrew language, maintains however its sophistication. The language even spoken by Christ is evidence of the natural degradation of time. Through the scriptures and various quotations in the new testament, Christ spoke a language was a Hebrew mixed with a combination of Syriac and Chaldaic, even though of course the language he spoke was Aramaic. Now in our present time, very little of the ancient Hebrew language remains. What does remain of the original language is written into the law and the sacred text of the Hebrew scriptures. As we see in Book three, there is a distinction between the vernacular language and the written language. Written language can retain its ancient purity whereas the Vernacular language is subject to Historical and social adulteration.

Not only the Hebrew language but also the Hebrew writing, antedates the flood and survives in the family of *Heber* and *Abraham*. Hebrew writing was invented by Adam like the Adamic language there is also an adamic script. This pristine Hebrew script is not at all like the original Hebrew script.

BOOK III.

or,

Prologue to an Atlas of Languages.

In which

we shall proceed

by means of some preliminary remarks concerning the variety of languages and the widely-dispersed families of dialects, which irrupted, along with idolatry, upon the whole world at the time of the primal confusion

PRELUDE:

The confusion of tongues was a punishment that was both just and appropriate for the sins of the builders of the tower of babel. He speculates over the misunderstandings and the altercations which arose the morning after following the confusion of tongues. One would speak the word for bread while the other would understand the word for brick. The cause of the confusion of tongues is that only god could have engineered such a punishment it could not have been done by men themselves or even demons. None could have the power to alter and mutate a language into a variety of so many other languages. Where God is the ultimate cause of the confusion of tongues, the historic root is the curse of Noah on Ham and Can and which is fulfilled in the confusion of tongues. God showed a great deal of mercy instead of a host other punishments of a much more terrifying nature for the sins of idolatry, raining fire and brimstone earthquakes or even destroying the face of the earth. He in fact chose the confusion of tongues because he is a god of mercy. In the confusion of tongue he provides by means of the very diversity of language a way in which mankind may be reconciled. In that man still has the powers of reasoning by which he can learn the other languages. God's plan is to reconcile man by the means of a linguistic pluralism. This is proclaimed in the trilingual inscription on the cross of Christ, which says Jesus of Nazareth, King of the Jews, written in Hebrew, Greek and Latin over the cross. As well as in the miracle of Pentecost, where an orderly multiplication of languages in which the apostles may all speak different languages. In Christ is edified a new universal city, not built of stone or with construction tools, but by virtue, sanctity and the knowledge of languages. The work of the holy spirit is to bring peoples of diverse languages in the unity of the faith. Language is the true bond of humanity as opposed to tyranny which is a uniter artificially constructed.

SECTION I The deviation, corruption and extinction of languages

Chapter 1. The occasions and multiple sequence of causes by which languages flourishing in various realms nonetheless have suffered corruption of all kinds and oblivion.

The five major causes for the reasons why the languages disappear. Firstly there was the co-mingling of the peoples, the infusion of one distinct people with another will cause the eventual corruption and suffusion of the languages. Secondly, the change in empires and monarchies, When one empire dominates or conquerors another, the victor usually dominates the other through the enforcement of the victor and the elimination of the victim's language. Thirdly calamities such as war pestilence and famine which wipe out entire populations. Fourthly, colonization, citing the eastern Europe, Greek dialects spoken in

southern Italy, Creoles such as Maltese, showing that colonizations results in the deformation and the disappearance of languages. Finally, the changes in pronunciation which transform the spoken language into something unlike their ancient origin.

European languages are characterized into five general families:

Hebrew, Greek, Latin, German and Illyrian (slavic).

As well in general terms the Asian and African languages which themselves have a multitude of variants. Asian and African languages are without affinities with themselves and with the European tongues. Being that they do not form part of the genealogy of the present western tongues. In this case the distinctive bloodlines of Chem and Japhet are preserved in the European language. There are many and they have no affinities with languages of the European bloodlines.

Chapter 2. The origin and introduction of idolatry into the world by reason of the diversity of languages and customs which flourished amongst the races and different nations.

The historical connection between diversity and idolatry. The primeval religion of mankind was condition by the fact that there was a single language of mankind before the division of tongues. This guaranteed the religious unity and the purity of faith. With the division of tongues each linguistic group made up their own religion or had one imposed on them by their conquerors and their leaders.

Chapter 3. The variety and multitude of numbers which arose from the confusion of languages and the division of the races.

COMPARISON of the deeds of the first patriarchs of the world, placed side by side with the deeds of Osiris, Isis and Horus.

Quoting from Mimonedes in discussing the tribe of Chem as the source or author of all Idolatries. The sons of Ham corrupt the biblical account of creation by introducing the cosmic myths, for example, that Adam came from the moon. Hence came as well doctrines like the eternity and the multiplicity of the universe. The living and divine natures of the heavenly body, the transmigration of the souls, etc. Such notions arose because people had no written scriptures before Moses. The Egyptian myths about the origins of the Human race. Because there is a vestigial memory of the truth, memory that remains engraved within the human spirit, all of these diverse accounts bear some resemblance to the truth (the Bible). These are vague and murky reflections of the truth.

The comparative table of parallels between archetypal figures in the bible and the gods of the Greek and Roman mythology.

Showing for example how Adam is paralleled to the roman god Calace or Heaven or by the Egyptian God Osiris. In the bottom part of the table the characteristics that they share together are shown. Such as builders of cities, inventors of Agriculture, inventors of the arts and givers of laws. Eve, is related to Vesta and Isis, they are the mothers of all living things the progenitors of the entire human race, the mothers of the gods and the givers of largess, etc.

All these are paralleled to show that the entire cross cultural pantheons of the Gods are corruptions and reflections of the original biblical truth. Under King able Cain's antitype is Nimrod, Mars and Vulcan, Typhon, the inventors of all evil and the lovers of war and the authors of idolatry and murderers.

A comparative table of Egyptian, Latin, Hebraic and Greek divinities.

Designed to show that there is a common or substrate thought about the gods, or a common structure of the divine throughout the world and its history. A vestigial memory of the biblical truth.

The hermetic chart of the gods, showing the names of all the gods and goddesses to be reduced to optical (luminous) manifestations of the sun and the moon. We find all the names, Mars, Pluto, Saturn, Apollo, Jupiter, are represented by the sun and the various activities in relationship with the moon (the Goddesses) in the phasing throughout the year and ultimately focussed on earth. These are not Planets but the Phasing of the sun and the moon with the names of the gods.

The Inscription

All the names of the Gods and the Goddesses, The nations of the Gentiles are reduced to the sun and the Moon. This is referred to Obeliscus Pamphilius for more information.

Chapter 4. How names were first imposed.

The discussion begins with the origin of names with the discussion from Plato's dialogue *Crytlus* , about the origin of names. The first position is that names are innate, they reflect the nature of the object named, they are true mirrors into the ontological nature of the object to be named.

The other position is that names are the merely the products of human convention, they are as labels.

There are two kinds of names: there are primary names as which are the innate names given by Adam and which reflect the true nature of the object named, and there are secondary names which are conventional names which came in to being after the division of languages, but which can be in some cases traced back to their primary names. In other words, even in our fallen linguistic world, we do have some clues which can lead us back into the original names for things given to them by Adam, and thus they have tremendous power, because they reveal the true nature of the object named.

Chapter 5. What was the first language of all, and what it was like.

The first language was Hebrew for this was the language of Adam. Hebrew is the first tongue because it is the most ancient. Because of its simplicity, it has an extraordinary antiquity due to its rudimentary character that has not been refracted, or complicated through time. And secondly, it contains cabalistic mysteries. Locked into its etymologies are empowered mysteries.

There is dispute over whether Hebrew or Chaldean was the first language. The answer is in both to this scholarly debate. Hebrew is the first learned or written language, the first *High Language* , Chaldean is the first vernacular, the first spoken tongue.

Hence a genealogy of the Hebrew language follows.

Chapter 6. The letterforms of the Samaritan language, and whether it was really Assyrian, or Hebrew.

Samaritan, or the modern Hebrew. From the modern Hebrew one can deduce from the present day Hebrew what the ancient pristine biblical Hebrew was. And thus the origins of writing.

Since the oldest Hebrew texts are written in the Samaritan dialect, it is

important to determine the origin of the Samaritan script. By a comparative table and by the evidence drawn from Hebrew numismatics, (see the comparative table)

The table

From left to right, the values of the roman alphabet are reconstructed to the angelic script to the angels time in Adam. This shows the transformation of the form from the ancient Samaritan letters to modern Hebrew and ancient Assyrian. This establishes the link between contemporary Hebrew, which is not in itself the angelic script, and the origin of writing of the angelic script. The divine pedigree of the present day Hebrew script is what is at stake.

In transcribing the books of the law, *Ezra*, the scribe who transcribed the books when the Jews returned to Jerusalem from Babylon. The script that *Ezra* transcribed it in was modified but not substantially altered.

Symbols on the ancient Jewish coins, and numismatics from an ancient collection. The inscriptions are transcribed and interpreted. Both the script and the images on the coins are treated in this transcription as the interpretation of the Egyptian hieroglyphics.

i. Solution of the controversy regarding the Assyrian, Hebrew and Samaritan letterform

COMBINATORY TABLE, in which the form of primitive letters, and the successive propagation through time of all the letters which take their origin from them, are described according to the most trustworthy authorities. From this it is clearly deduced that of all the alphabets of the languages, none has retained traces of the original letters.

ii. Of the traces (?) of Hebrew clearly visible in the Samaritan alphabet.

Chapter 7. The origin of letters and scripts.

The origins of letters and scripts. Adam was created with all the perfections that God had infused into him, including the perfection of language, and language wouldn't be perfect if it did not have any form, therefore along with all the arts and sciences that he was taught, he was taught the science of writing. His tutor was an angel.

Chapter 8. The marvellous power of the Hebrew language, bestowed upon it by Adam, of elucidating the significance of things. The combinations of meaning latent within the names of animals.

Discussion of ancient pristine Hebrew. The marvelous power inherent in the Hebrew language in order to illuminate the true meaning of things. This power was infused by Adam when he gave names to the creatures. This is evident in Hebrew even to this day. Adam bestowed names to all the animals. Example: why did Adam give the name *Arieh* to the lion? The word *Arieh* is onomatopoeic and thus it imitates the roar of the lion. This is why Adam chose that name, for the roar of the lion is its essence.

Why is the eagle called *Nesra*?

The Rabbinic speculation on the nature of the Hebrew letters themselves. One signifies fire, one signifies spirit and another signifies a downfall or a falling. So all the letters contribute to the meaning of the actual name. Thus the Adamic

naming of the animal follows a twofold pattern, one is onomatopoeic and the other is a rabbinic or cabalistic speculation on the significance of the individual letters put together in a rebus like form. This is very close to the hieroglyphic studies of the Egyptian language. See the examples of the word lion and of dog.

Combinatory Table where the letters comprising of the names of animals are used

From the primary names of the animals and their characters all the words in the Hebrew language are deduced. Ex. *Box* for *Ox*. All the letters for this appear in the following words in Hebrew: *Domino Suo* (to his lord), *Solutus* (dissolve), *Opertur*, *Virtus* etc. Thus the words for the animals become the entire basis for the language itself.

Hebrew is a language which works very much like alchemy. Primary words and names, As in the twelve tribes of Israel (pg. 171) become transmuted into other forms and create the whole expressive structure of the language.

Chapter 9. The secret letters of the Copts, whose language is one of the oldest of languages.

How it is related to Hebrew.

The Egyptian language, beginning with the mystical letters of the Copts, whose language was one of the earliest of languages. First of the languages in the hierarchy following Hebrew is Egyptian. He connects his interest in the language by introducing the Coptic monks as practitioners of the languages of the Hieroglyphics. They knew and studied these very deeply. This connects the Hieroglyphics with Christian piety and knowledge.

The first desert fathers and their knowledge and aesthetic practices with hermetic mystical teachings in the hieroglyphics. Several allegories from these teachings.

Pachomius, the father of Egyptian monasticism. And various texts in which letters are used to stand for theological concepts (pg. 173). And thus several allegories are introduced into the text in order to explain from these sources.

eg. Allegory II. Place a triangle before your eyes and your soul shall be well. This is connected to the statement of Christ "be perfect even as your father in heaven is perfect". The sacred triangle or the D is a symbol of geometric perfection.

Allegory III. Singing as the letters CW signifies a certain symbolic response. The ancient Egyptian monks practiced a speculation on the mystical nature of ancient letters and writing which goes back to the ancient Hieroglyphic practices.

The invention of the Greek letters (pg. 176) a comparative table of Hebrew, Coptic, and Samaritan and Latin.

The primeval construction of the Egyptian alphabet, and how it was instituted by Thoth, or Hermes Trismegistus.

The relationship of the Coptic words to the primeval Egyptian letters, that are invented by Thoth (pg. 177).

eg. The Stork is the allegory for a good Demon, or spirit and it is translated into Alpha. These are codes for meditating on the Hieroglyphic meaning of the letters.

(pg 180) A more in depth discussion of the individual hieroglyphics
 eg #II The bill of the stork and the square This character is in the Egyptian and stands for *Norm* and it is properly expressed by the Greek letter gamma By which indeed it is designated hieroglyphically and it symbolizes the symmetry of all the things in this universe Hence, it is placed in the hands of *Horus* in most of the paintings and the representations who is the ruler of this world It is also related to the *gnomon* as in the spike of the sundial Which gives measure and proportion in architectural operations And therefore represents to the genius of the fabrication of the world, measure weight and proportion The Egyptian reconstruction of the alphabets and thus all the words may be broken down into their components as in that of the eagle Introducing a form of the Greek alphabet

Chapter 10. Of the Phoenician language, one of the oldest of languages.

TABLE, showing a comparison of the Samaritan with the Ionian, Coptic and Egyptian alphabets.

An example of an inscription in Ionian characters carved onto a stone by the early Greeks.

SECTION II. Of the earliest languages, called "mother" languages, which have persisted in use from the time of the confusion of Babel until now.

PREFACE.

Chapter 1 Hebrew, the first of all the languages.

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Chapter 6. Ethiopic.

Chapter 7. Persian, or Elamite.

Chapter 8. Egyptian or Coptic, which we call "Old Pharonic".

Chapter 9. Armenian.

SECTION III. The earliest languages of Europe, and their characteristics.

Chapter 1. The origin of the Greek language.

Chapter 2. The origin, antiquity, corruption and restoration of the Latin language.

Chapter 3. The various qualities, changes and augmentation of the Latin language.

Inscription of the rostrum column.

Chapter 4. The origin, spread and corruption of the German language

The imperial German language.

Chapter 5. The languages of near-by northern lands.

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CHRONOLOGICAL TABLE of years since the Flood, in which the origin and increase of languages is explained.

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CONCLUSION.