

THROUGH THE TEMPLE OF SOLOMON TO THE TEMPLE OF HEAVEN: BACON'S NEW ATLANTIS

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"An intellectual metaphor adopted by an age is often a passionate attempt to forge at least the appearance of solution to an almost insoluble problem". This conclusion of Frank Manuel in his recent book *Utopian Thought in the Western World* (Oxford 1979) preceded his discussion of the importance of the conception of the two books in the 17th century. The book of Nature and the Book of Scripture are described by Manuel as the drugs to ease the pain resulting from the confrontation of science and religion in the age of Galileo and Boyle. Older and more important was the topos of the world as a temple, a temple which was patterned after the model of the Temple of Solomon, or, if you wish, it was the Temple of Solomon which was patterned after the Temple of the world. The therapeutic potency of this image to heal any broken unity in European intellectual history was even greater than that of the two books, since it was in its very structure an image of incompatibles assembled in concord. The Cosmic Temple of Solomon and its portable prototype, the Tabernacle of Moses, do not seem to offer any workable pattern for the solution of today's problems, when Salt treaties are thrown in the dustbin of the ears of the electorate. Solomon's Temple of peace and harmony survives in these times perhaps only within the protection of a masonic lodge. But in the past two thousand years it performed its function to unite the irreconcilable very well. Philo of Alexandria used the topos to unite Plato and Moses in allegory, guiding Man through the Jewish Temple on a Greek journey to God; the writer of the Epistle to the Hebrews -traditionally identified with Saint Paul- transformed the Philonic allegory of the Cosmic Tabernacle into a justification of the concept of a church sitting on the shoulders of her mother, the Synagogue,

without paying her the proper respect as was ordained by the 5th article of the Decalogue; Pico della Mirandola appointed Hermes Trismegistus as the New Highpriest of the Old Philonic Tabernacle, integrating pagan Hermetism into a Christian Theology reformed through Cabala; Robert Boyle gave his inquiry into the secrets of Nature the character of a priestly mission by comparing Nature to the Jerusalem Temple; Madame Blavatsky tried to understand the biblical description of the structure and utensils of the Tabernacle as an early blueprint of an "Archaic telephone", the reconstruction of which would enable her to talk directly to the spirits: contact with them would help her - she hoped - to save the drifting world of the late 19th century. Finally Rudolf Steiner would translate Blavatsky's blueprint in the Goetheanum, designed as an instrument to spiritualize matter towards a final reunification with a supposed world-spirit.

It may appear to you to be Sense and Nonsense. For me Philo and Pico, Boyle and Blavatsky are interesting in their speculations because all they share in the traditional attempt to relate, in some way or another, the structure of the Temple of Solomon with that of the Universe. I would like to label this tradition as the Philonic Tradition in Architectural Thought. I intend in this paper to give you a general idea of the character of this tradition, after which I will try to illustrate with Bacon's New Atlantis how this tradition could be used in a more specific case. It is a tradition because all the speculations are directly or indirectly dependend on the same set of assumptions concerning the cosmological interpretation of the structure of Temple and Tabernacle. It is a "Philonic" tradition because those assumptions were for the first time combined in one unified picture by Philo of Alexandria, (C.25. B.C.E - C.50 C.E) whose writings were the source of many of the later derivations and adaptations. His writings revolutionized the concept of religions architecture. The impact of this revolution on European thinking on architecture was immense due to the fact that his allegory was that of the Temple of Solomon and the Tabernacle of Moses, two canonical and acceptable building in a culture, day after day in sermons and religious writings confronted with

the vices of Babel and of its Tower. The status of Temple and Tabernacle as revealed architecture, the elaborate if boring descriptions of their appearance in the books Exodus, Kings, Chronicles and Ezekiel and the mythical wisdom and supposed magical powers of Solomon and Moses were all factors which would contribute to the richness and depth of cosmological speculations on those two buildings.

Compared with the Philonic tradition in Architectural thought, such-like speculation in the culture of classical antiquity were insignificant. Even the more influential Stoic tradition concerning the metaphor of the cosmos as a temple remains only a shadow of its biblical counterpart. Basically the reason for the relative unimportance of the Greek tradition, and consequently the Roman, in the cosmological speculations woven around buildings can be found in the different conception of Nature consequently of the relation between nature and architecture in the Greek tradition. Nature was in Greek thinking deified, and the gods were thus to be found in Nature, on a specific spot or place. The architecture of a temple do no more than reflect in its architecture the natural potentiality of the place where it stood, mirror the qualities of the of the Gods, who in their turn, were mirrored in the landscape. The notion of Decor, the aesthetics of appropriateness as described in Vitruvius' De Architectura, I 2,5 are the Greek and Roman contributions to our way of looking to architecture. This Architecture representing the visible cosmos occurred occasionally, if such was appropriate. Thus we see in the Domus Aurea the cosmic ceiling as the appropriate canopy for the universal ambitions in art and the universal reality of power of Nero, and the Pantheon is without doubt well designed for a tomb of all the Gods. And let us not forget Roman funeral architecture, in which the traslation of such notions as underworld and earth in stone create a partly cosmological but very relevant surrounding for the entombed. But these examples are exceptions. No special type of building would become canonical as a representation of the cosmos.

The view of nature as developed in Judaism during the Second Temple period, was completely different from the Greek. God is standing outside nature, as is Man, and nothing in nature, not even the Sun or the Moon, supreme gods of the neighbouring peoples, share in God's divinity. The natural world is admired as God's creation, but not adored. Therefore the idea of architecture which is appropriate to some place or spot in this nature is in fact not relevant. If God had been found in the whole of the cosmos, perhaps it would have been apt to build the Temple of Solomon as a representation of this whole cosmos. But with the development of Judaism, God had developed away from the Mountain-God, or the Desert God, and in the time of Philo his essence was so much greater than the totality of creation that the idea of cosmological architecture as appropriate surrounding for God is antithetic to the essence of Judaism in that time, of Judaism ever since. But in the meltingpot of Alexandria and Philo's mind, Nature and Cosmos would get a place in the conception of God's relation with the world in such a way that this was acceptable even within the Jewish view on Nature. The Greek conception of Nature was robbed of its mythical aspect, and integrated by Philo in his brand of Judaism as the βασιλική ἑβος, the Royal Road which the soul ascends to God. The idea of this Royal Road forms the starting-point and essence of the Philonic speculations on the cosmic qualities of the Temple of Solomon and the Tabernacle of Moses. The cosmic structure of those two buildings comes in Philo's exegesis forth out of a theological necessity, and not from aesthetic suitability. This is also reflected in the relative position of the beholder in the Greek and in the Jewish/Hellenistic idea of cosmic architecture. In the Greek and Roman architectural cosmos the beholder remains outsider. Even if he is allowed to enter the cosmic hall, not for him are the splendour of the vault and the golden stars created and maintained. In Philo's explanation the cosmic temple is open, and the pious reader who recreates the cosmic splendours in his imagination, is invited to enter this temple, since all allegory is only directed to facilitate the mystic ascent of his soul.

It is in Philo's writings on the Temple and the Tabernacle that we find the origin of Post-Antique or Early Christian architecture, and with that, of all European religious architecture ever since. That which separated the Early Christian basilica from all earlier Greek and Roman religious architecture was its quality of being a "Wegraum" as Stange labeled it, in his *Das Fruhchristliche Kirchengebaude als Bild Des Himmels* (Cologne 1950). This idea of a cultic space as a Royal Road depends in my opinion directly on Philo's writings. As Early Christianity saw itself basically as "Road", so did the basilica give a suitable setting for ascent of the soul from Fall to Grace, Matter to Spirit or from Shadow to Reality. The idea of the Early Christian basilica, especially the Constantinian ones, was directly depended on the Philonic cosmological speculations on Moses' Tabernacle, speculations which can be found in his *Life of Moses* and *Questions on Exodus* and which we will try to elucidate here more in detail.

The structure of the Temple of Jerusalem and of the Tabernacle in the desert is simple. The actual templebuilding is surrounded by a Court. The building or the tent itself is divided into two spaces: the first and largest is the Sanctuary, the second which is cubic is the Holy of Holies (III I & 2). Philo considers the Court to be an allegorical representation of the earth. In this sphere Man will have to meet the first requirement for a mystical advance to God: his soul must be filled with *ἔδωξεια*, devotion. The altar represents the proper intention of the man who approaches to sacrifice (III 3). This first station on the Royal Road is mirrored in the Christian basilica in the Narthex, also considered to be an image of the earth in Christian Theology, the place where the as yet unbaptised assemble to follow the Holy Service inside the church, their hearts filled with devotion. The second level or station on the Royal Road in the Temple, Tabernacle and churchbuilding in the Sanctuary or the Nave. In the Philo's interpretation this room is emblematical for the whole material, visible world. The altar of incense represents all on earth that is longing for God. (III,4). The menorah symbolizes the visible heavens with the seven planets, and the table with the twelve breads the nourishing winds, the *πνευμα ὁσων* in the

material world (III,5). In this part of the Temple and the Tabernacle a kind of second degree in the spiritual progress or initiation is reached: it is the cosmic part of the mystery, or, as Good enough called it in his *By Light, light* (New Haven 1935), the Mystery of Aaron. Philo describes here the progress through a cosmos in a state of perfection, but a cosmos which is still material. Halfway between the filth and vices of the earthly condition and between the immaterial and eternal glory of the Emyrean Heaven of Heavens this sphere is truly Celestial, the part of the cosmos with which Philo compares the Sanctuary. In the church the Sanctuary of the Temple is transformed into the nave. This is the part where the laymen assemble, the church which belongs to the 'world', but is in some way a perfected world. It is the place of the Ecclesia Militans. In the earliest basilicas the nave was empty during the greater part of the service, and the worshippers were placed in the aisles. Only when walking to the altar to take part in the mystery of the Eucharist would the layman go through the nave: a clear indication of the nave's character as a "Wegraum".

Returning to Philo's allegorization of the structure of the Temple, we read that the Holy of Holies is to be seen as a representation of the intelligible cosmos, the *κόσμος νοητός*. To include in cosmic architecture the invisible, immaterial part of the universe is an innovation of Philo, at least so far as the western tradition is concerned. In this final stage of Royal Road we see the Ark of the Covenant with the two cherubim, (III,6), symbolic of the immediate court of God in the Emyrean world, or, believing that all created is only the materialisation of certain qualities of God, it is an earthly image of his powers of Mercy, Law-making, Creation, Ruling and finally the Logos. Philo identifies this part of Tabernacle with the World of Ideas. In the church this part of the Temple is transformed into the "Sanctuary", the apse, in many churches and liturgical texts called the Holy of Holies, the place where the Bishop and the priests are seated as earthly representations of God's court in the Heaven of Heavens. Mosaics give here in splendid colours a vision of the world and state of blessing to come, whether symbolised as the Church Triumphant, Paradise, the Heaven of

Heavens or New Jerusalem.

With the mention of New Jerusalem we suddenly leave the World of Philonic architectural phantasy to enter the Babel of historic scholarship. Since the publication of Kitschelt's *Die Fruchristliche Basilika als Darstellung des Himmlischen Jerusalem* (Munich 1938) the question of whether, or how the Medieval churchbuilding was meant to be a representation of the Heavenly, New Jerusalem has obsessed especially German scholars like Schneider, Stange, Sedlmayer and Bandmann. I am inclined to the view that none of them was able to formulate a satisfying solution to the problem because none of them realised the very intimate relation between the idea and image of the New Jerusalem and the speculations on the Holy of Holies. The whole problem is that of the relative position of the concept of the Heavenly Temple to that of the Cosmic Temple. The latter was a Hellenistic product of an Alexandrian Jew who needed an architectural allegory of his idea of the Royal Road through the cosmos. The idea of the Heavenly Temple, an already existant or otherwise future image of perfection, had been created by the prophets in the last days of the Temple of Solomon, when the prestige of the Temple had decayed and the ritual had been corrupted. The Temple, being only a shadow of its former glory, became in the theology a shadow of a heavenly counterpart, which was the real Temple. This conception had become the major motive in all Jewish eschatological and apocalyptic movements and speculations. In Philo's commentary the Heavenly Temple is only mentioned once; the mention of a model of Tabernacle shown to Moses on Mount Sinai in Exodus 25 40 is for him the most important place in the Bible where the Platonic concept of idea and shadow is indicated. The Earthly Tabernacle is a shadow of the model. Hence his interpretation of the name of the craftsman who made the Tabernacle, Bezaleel, as "in the shadow of God", which Philo explains as meaning that he only makes the shadow of the idea or archetype seen by Moses on the Mount. In Philo's use of the conception of the Heavenly Temple or model no eschatological or apocalyptic notions can be traced: his only purpose with the introduction of the theme is to make Moses into a Platonist. But in the eschatological brand of Judaism which would be transformed by Paul into Christianity,

Cosmic Temple are transformed in the mystical ascent in time of the people of God towards the New Jerusalem of the end of times. Also here in the Epistle to the Hebrews is the ultimate source for what Friedrich Ohly called "the Cathedral as Zeitenraum", the Cosmic Temple of Philo remains the framework in which all these later ideas could develop and flourish, and the discussion on the influence of the topos should therefore be placed within this framework, within the Philonic Tradition in Architectural Thought, as well as many other works of art and thought in which the Temple of Solomon or its heavenly prototype play an important role. I started this paper by referring to the 'healing' power of the cosmic Temple and Tabernacle. I believe that the basic pattern on which this healing power is founded in the one we sketched before. It is the pattern that the buildings form a bridge between themselves and their idea. The concept of going through the (Cosmic) Temple of Solomon to the (Heavenly) Temple, the model shown to Solomon, makes the whole theme of the Philonic Temple pre-eminently real. The theme exhibits, to paraphrase Mircea Eliade, super abundance of reality and is therefore very apt of handling reality, of healing its brokenness. For example, I do believe that the concept of the "Westwerk" in the Ottonian and German Romanesque architecture is ultimately derived from the Solomonian forecourt. Through the cosmic gradation of those churches the gap between Rome (The Holy Roman Empire) and New Jerusalem (The Church) is bridged as in a Royal Road, while in the same time the whole churchbuilding is an earthly image of the heavenly reality. But not only in architectural imagery is the influence of the conception everywhere to be felt. Also in bridging the stalemate between science and religion or uniting apparent irreconcilable factors as Nature and the method of dealing with Nature we meet the Philonic tradition in sometimes confusing camouflage.

Having discussed so far the general characteristics of the tradition, I would like now to use those observations in the analysis of one monument which was created within the Philonic Tradition in Architectural Thought. This monument is Bacon's New Atlantis. I do not want to hide the fact that in the discussion of New Atlantis I will get round the problem of what

were Bacon's sources in his adaptation of the Philonic tradition, as far as it forms a problem. The conception of the Philonic interpretation had become something of a commonplace. In almost every commentary to the book of Exodus, in the writings of the Fathers, in encyclopedic works and in poetry as that of such different persons as Guy LaFèbre de la Boderie and George Herbert the theme reappears. It was almost impossible for a educated man not to know the general principles of this tradition, something which makes the question of Bacon's direct source less important. I will try to make clear in my discussion of New Atlantis that what we see there in fact a quite traditional adaptation of the Philonic allegory of the cosmic Temple of Solomon, of which Temple the Holy of Holies is in the same time end of a Royal Road and representation of the heavenly model of this cosmic temple, New Jerusalem or, in short, the Utopia as instrument and as goal.

New Atlantis is the fable in which Bacon projected his ideal House of Solomon, prototype for a scientific academy which should be built in England to encourage the advancement of the sciences. I do not want to discuss here the character of the House of Solomon at length, since it is the imagery of the fable as a whole which gives the real key to its meaning. But a few remarks on this famous House must of course be made in the context of a paper on a possible influence of the Philonic tradition in Bacon's work. The main activities in the House of Solomon are to create imitations of Nature. Unlike the Greek view, which held that Nature can not be imitated or dominated - in their opinion to wish such would be an act of hubris - the Biblical point of view was that Man was given the task to command Nature, he was given the possibility of imitating natural processes. In the Aristotelian conception one can help Nature only in fulfilling her own designs, a logical conclusion if one accepts that Nature is deified. In architectural terms we would translate those notions here in the aesthetics of Decor. In the Biblical view, which the line Francis Bacon would take, Man can use Nature to fulfill the design of Man. This is Nature as it is represented in the Philonic "Aesthetics" of the Temple. If the House of Solomon because of its name suggests any relation with the Temple of Solomon, it is already on this

ground that some relation with the Cosmic Temple of Solomon can be expected. In both House and Temple Nature is used, imitated and commanded to help Man in his journey to the Holy of Holies, towards his New Jerusalem, or, in New Atlantis' case, to make Bensalem into a veritable Utopia.

The fable of New Atlantis describes the arrival of some seamen after a dangerous voyage in an unknown island somewhere in the Pacific Ocean, followed by the story of their more spiritual journey on the island towards a Baconian type of Theognosis: the unveiling of the secrets of Solomon's House. They land firstly in the harbour of a town named Bensalem, "Son of Salem" or "Son of Peace". The relation with New Jerusalem will be obvious. The sailors get instructions from officials, instructions written on a scroll sealed with a stamp of Cherubim-wings "not spread, but hanging downwards". These Cherubim-wings appear to be the emblem of New Atlantis, since they will reappear again later in the fable as a kind of coat of arms. After a short quarantine they are allowed to enter Bensalem, where they are lodged in the Stranger's House. The reception there does them remark: "It seemes to us, that we had before us a picture of our salvation in Heaven", and "That we were come into a land of angels which did appear to us daily". The governor of the house tells them the history of the island and its culture, how they had become Christian and why they remained completely isolated from the rest of the world. New Atlantis has the "condition and propriety of divine powers and beings, as it is hidden and unseen to others", but the miracles of New Atlantis are not created by magic: as the writer remarks, the supernatural sphere is more angelical than magical. The suggestion that Bacon describes his version of the Emyrean world the New Jerusalem or the Heaven of Heavens becomes very strong when the Father of Solomon's House pictures the organisation of its workers as structured in nine levels, a hierarchy which resembles Dionysius' supercelestial hierarchy of angels in more ways than one. We concluded before that the concept of New Jerusalem or of the Emyrean world is closely related to the Holy of Holies of the Cosmic Temple of Solomon, and many elements in the imagery of New Atlantis point to the imagery of the Holy of Holies more directly. When the Father of the House of Solomon visits Bensalem, he is seated in a chariot without wheels, litter wise, with two horses at either end,

the idea of the Heavenly Temple got momentum. AS did the Christians see their redemption as a fulfillment of the ancient prophecies made by Jesaja, Ezekiel and others, it was in the Resurrection of Christ and the establishment of the Church that they celebrated the building of the New, Heavenly Temple, predicted by the Prophets, and not built by hands. An Alexandrian Jew, converted to Christianity, has been probably the author of the Epistle to the Hebrews. He was spitiually closely related to Philo, and combined in one framework of thought the Philonic conception of the cosmic tabernacle as a Royal Road and the idea of the Heavenly Temple or Tabernacle as an image of prophetic fulfillment. In the Epistle the relation between Judaism and Christianity was also once and for all decided upon after the pattern of Tabernacle. The argument developes on the lines of Philo's cosmic interpretation of the Tabernacle. The First Covenant had regulations for worship and Earthly or Cosmic santuary in contrast to the Heavenly Tabernacle. In this Earthly Tabernacle the worship takes place in the Sanctuary. The Holy of Holies, which the writer labels as the "second tent", is not open but for the Highpriest on the Day of Atonement. Further on in the Epistle the Second Tent or the Holy of Holies is interpreted as the Heaven where God resides, and it is here where the writer follows Philo's allusions. The Holy of Holies becomes in his hands the Heavenly Tabernacle, the Tabernacle not made by hands. Christ enters this Heavenly Tabernacle by entering the Holy of Holies. In this rather simple way the conception of the Heavenly Temple was integrated in that of the Cosmic Temple, and thus the Royal Road leads to its fulfillment by being in the same time an image, an earthly shadow, of this heavenly reality. This additional meaning in the interpretation of the Holy of Holies, that of one part of the Temple representing the whole Temple but in a more heavenly state, is in fact the key to many problems concerning the use of the image and symbolism of the Temple and of the Heavenly Temple and New Jerusalem in Christian culture. This ambiguity in the meaning of the Holy of Holies gives a sound basis for those Medieval interpretations in which the spatial elements of the mystic ascent of the soul through the

richly trapped in blue velvet and gold embroidery. It is topped by a small Cherub "With its wings displayed". This chariot, made of cedar, is a clear allusion to the cedar Ark of the Covenant. The wings of the cherub are spread when the Father arrives in Bensalem. The wings of the cherub on the scroll which was presented to the sailors on their arrival in New Atlantis were hanging downwards. This could possibly be related to the description in I Kings 8:7, where is told that when the Ark was placed in the Holy of Holies "The Cherubim spread their wings and sheltered the Ark and its shafts". The mysterious colour blue which makes the tone of New Atlantis can be related to the colour symbolism of the Heavenly throne of God, placed in the Holy of Holies of the cosmos, as well with the blue fabric in which all the furniture of the Tabernacle, especially the Ark of the Covenant, were wrapped while on journey. I do not think it is necessary on this point to illustrate my suggestion any further. Perhaps I may add only the remark that there could be even possible influence of Philo's writings in even other imagery of New Atlantis, such as the description of the Feast of the Son. The Jew Joabin, who lifts for the sailors the veil before the House of Solomon, is a Jew with a positive attitude towards Christianity, and that recognition he shares only with Philo, the only of the "Post-Crucifixion Jews" who was seen by Christians as having had a positive opinion on Christianity. Not only did he lift the veil of the allegorical secrets of the Bible for all Fathers after him, but was even believed, as is described in a legend quoted by Eusebius, that he had on visit in Rome met Saint Peter, and, as they call it now, the two gentlemen would have had a constructive dialogue in a atmosphere of mutual understanding etc.

Returning to the Cosmic Temple of Solomon, the question comes up if we can attach to the heavenlike Holy of Holies of New Atlantis also the cosmic Sanctuary and Forecourt. I believe this is possible. Bacon's temple, cosmic in all its qualities, is a book, on Nature, and thus, at last, the metaphors of Book as Nature, Nature as Temple close circle in the Book as Temple. The book is Bacon's *Sylva Sylvarum*, to which New Atlantis was attached as an appendix, and whose frontispiece marks the entrance, with two columns

before the Sanctuary, as if it were the Temple of Solomon. To understand how and why Bacon conceived the Cosmic Temple of Solomon as this book, it will be necessary to investigate the background and character of the last of his great works produced in the waning of his life: *Sylva Sylvarum*.

Bacon had been throughout his life the great planner of science, the architect of the Great Instauration which was thought to undo the catastrophic results of the Fall of Adam, the most deadly of which had been in Bacon's eyes the fact that Man had lost control over Nature, a process which is repeated again and again when we violate the truth of Nature by rationalist prejudice. Bacon's programme was one of basically empirical research, through which knowledge would be increased, and which would finally pave the way for the Messianic Age when Man would have again mastered Nature. Bacon tuned his messianic, apocalyptic speculations as far as science is concerned in on such political speculations circulating in the English court round Elisabeth I and James I. But the last monarch did not develop into the Messianic New Solomon as Bacon had hoped, and the Lord of Verulam had to continue alone. Signs after 1610 from the Continent that support from another side would help him must have stirred his hopes. In romantic and obscure pamphlets Europe was urged to join in a final battle against the Papal Antichrist the history of which has been described in Frances Yates *The Rosicrucian Enlightenment* (London 1972). In this battle the advancement of sciences through the collaboration of scientists and magi would play an important part. In England Bacon worked on the Latin translation of his programme for the advancement of the sciences, the *Instauration Magna*. This translation would help to create the international cooperation of scientists in the dawn of the Millennium. But the publication of this work did not appear until the fateful year 1620, the year when all the expectations of a sudden change in Man's fate on earth through the victory of the Rosicrucian King and Queen, Frederick and Elisabeth of Bohemia, were crushed in the reality of the horrors of the battlefields. The spiritual collapse was complete, and while Europa was dragged into the Thirty Years War, James I disposed of Bacon, who had been perhaps too enthusiastic in his support for the Palatinate cause, through the justified but still quite ridiculous accusation of corruption.

Bacon's whole ambition before the collapse of his hopes and social position can be summed up in the emblem of the two columns of Hercules, an image which he used up to 1620 very often. Those two pillars symbolised for him Aristotle and Galenus, or any other scientific dictator from the past, who stood like the columns of Hercules at the border of the old world. But in the new age sailors had gone beyond those columns, and discovered new worlds; scientists should pass the columns of the ancient writers and follow the example of the great discoverers of the earth. In all his works Bacon urges others to go further, to circle as heavenly bodies the earth. He saw himself as the architect of the enterprise, as a man who saw the structure of the whole, who recognized the providential order in the universe. In nature, he wants to create the framework within which the scientists would be able to prove this providential order by empirical research. The journey of the scientists through the building of creation would reveal the reality of its structure, as he said comparing scientists with sailors: "For it may be truly affirmed to the honour of these times, and in virtuous emulation with antiquity, that this great building of the world had never through-lights made in it, till the age of us and our fathers ... But to circle the earth, as these heavenly bodies do, was not done nor enterprised till later times: and therefore these times may justly bear in their word, not only Plus Ultra, in precedence of the Non Ultra and imitabile fulmen in precedence of the ancient non imitabile fulmen but likewise imitabile coelum; in respect of the many memorable voyages, after the manner of heaven, about the globe of the earth" (*De dignitate et augmentis scientiarum*, lib II, 10). This passage shows that man in this journey through nature as it lies beyond the columns is able to compete with heavenly as well with terrestrial nature. Discoveries are new creations and imitations of God's work, and with that the old Aristotelian despair on the impossibility of the arts to compete with nature has gone. The view expressed by Bacon here is basically Biblical.

Bacon talked in this passage about the "great building of the world", representing Nature to be conquered, to go through. In the time he wrote the *Novum Organum*, the metaphor of the World as a building had become his most important image to express

his idea of nature and the world as structural unities. And as the world was a building, so should the image mirrored in our minds be a buildings. The highest aim of Natural Philosophy should be to give an exact picture of the world, and if this world was a building. So Bacon states that "I am building in the human understanding a true model of the world" (Bacon, Works, ed. Spedding VIII, bb) "a model which has a specific form as he describes in Aphorism 120 of *Novum Organum*: "I do not raise a Capitol or Pyramid to the pride of men, but lay a foundation in the human understanding for a Holy Temple after the model of the World" Bacon's use of the aphorism was such that he relies completely on the simple sensuous impression which is inherent in its content and through which the message should be transferred to the reader. The message of this aphorism is clear: not Rome or Egypt, but the cosmic Temple, of Jerusalem, is the model of the world. This sudden appearance of the Jerusalem Temple in all its cosmic glory becomes even more clear when Bacon, in the same work, starts gradually to transform the columns of Hercules in those before the entrance of the inner chambers of a Temple: "But if a man there be who, not content to rest in and use the knowledge which has already been discovered, aspires to penetrate further; to overcome, not an adversary in argument, but nature in action; to seek not pretty and propable conjectures, but certain and demonstrable knowledge; - I invite all such to join themselves, as true sons of knowledge, with me, that passing the outer courts of nature, which numbers have trodden, we may find a way at length into her inner chambers (Works, IV, 42)". The outer courts of nature and the inner chambers are undoubtedly derived from the imagery of the Temple of Solomon or the Tabernacle. This imagery is very appropriate in a work which Bacon organized around the image of the scientist as a Moses type, a man with a priestly mission to remove the idols of the old age and lead the world towards the promised land of the new, messianic age. And as the two columns Jachin and Boaz stood before the entry of the Sanctuary of Solomon's Temple, and had to be passed if someone wanted to enter the inner chambers of this building, so it is here that the columns of Hercules of the frontispiece of this work get a double meaning. In the frontispiece of *Sylva Sylvarum* their transformation will be complete (Ill. 8).

Sylva Sylvarum was written by Bacon after 1620 , after his disgrace and after it had been clear that the Great Instauration had not been created through the uniting of scientists in the world of Rosicrucian enlightenment. All had led to nothing. In order to achieve anything of the projected building of science, Bacon had turned into a labourer, as Rawley, Bacon's secretary wrote in the introduction of the Sylva Sylvarum : "I have heard his Lordship speak complainingly, that his Lordship (who thinketh he deserveth to be an architect in this building) should be forced to be a workman and a labourer". Bacon had recognised that destroying the idols of Aristotle and Galenius was only one part of the programme needed to advance in the Building of Nature; the second part was the gathering of material, the collection of facts and data, fruits of empirical research. In earlier days Bacon had urged James I to imitate Solomon in ordering the compilation of such a natural history, but James was more interested in his witches and kingship. Without any support, it was in Sylva Sylvarum, Forests of Forests, that Bacon Assembled the material which would enable others to advance their research. All the facts were collected hurriedly and without much system, and Bacon had to ransack the work of others in his battle against time. Time actually ran out for him too early, and the work was published posthumously by Rawley. The importance Bacon attached to the Sylva Sylvarum can be seen if one reads sentences like this in his other writings: "It comes therefore to this: that my Organum, even if it were completed, would not without the natural history much advances the Instauration of the sciences, whereas the Natural History without the Organum would advance not a little (Works, II, P.16)". Finally Bacon was convinced that the publication of Sylva Sylvarum would establish his fame and reputation, and help his rehabilitation in society. For many 'Baconians', this work was inded his greatest legacy. The mass of facts, arranged in centuries, would remain throughout the 17th century an important basis for further research. The book would be reprinted 15 times, and no less an author than Robert Boyle would attempt to continue it.

New Atlantis was, as said earlier, added to the main corpus of Sylva Sylvarum as an appendix. With this in mind, or better, remembering this fact and New Atlantis' content,

we should look more closely to the frontispiece of the volume which embraced both works. The most notable elements of the image are two columns, resembling the columns of Hercules in the frontispiece of the *Instauratio Magna*. We saw that in the latter work the meaning of the columns had moved towards a more Solomonic sphere of thought, and here that development seems to be terminated in a 'Solomonic' victory. The architectural order of the columns is changed from the more Herculean Doric in the *Instauratio Magna* to the more Solomonic Corinthian in the frontispiece of the *Sylva Sylvarum*. The idea that the two columns before the entrance to the Sanctuary of Solomon's temple had been of the Corinthian Order was in the sixteenth and first half of the seventeenth century still common belief, as the writings of Villalpando, De Bray, Vredeman de Vries and others show. Another element undermining the Herculean character of the two columns is the disappearance of the ship between the pillars and the introduction in the frontispiece of *Sylva Sylvarum* of two new elements: the Tetragrammaton accompanied by two Cherubim and a globe labeled as the "Mundus Intellectualis". The *Mundus Intellectualis* is illuminated by the rays of the light emitted from the name of God. This last image is a very obvious reference to the mercy seat, where the name of God reigns between the two Cherubim, on the Ark of the Covenant, in the Holy of Holies of the Temple. Thus the structure of the Solomonic Temple starts to be silhouetted in the engraving. The columns mark the entrance to the Sanctuary, in the top of the frontispiece we see the Holy of Holies, and in the middle, where one would expect the Sanctuary itself, this mysterious "Mundus Intellectualis". Our identification of the book of the *Sylva Sylvarum* as the Temple of which New Atlantis is meant to be the Holy of Holies rests on the meaning of this element of the picture. Can the text of *Sylva Sylvarum*, sandwiched between the frontispiece and New Atlantis, be related to the "Mundus Intellectualis"?

The "Mundus Intellectualis", depicted as a globe, can be related to the literary image adopted by Bacon in his work on the character and scope of the human understanding: the *Descriptio Globi Intellectualis*, a work which he wrote in 1612 but which would not be published until 1653. The use of the term "Mundus" instead of

"Globus" here probably refers to the source of the conception of Bacon on the human understanding, Marsilio Ficino. What we see in the frontispiece is in fact an image, a memory image of his neo-platonic concept of the universal hierarchy of God, the Angelic Mind (which is the image of the name of God and the two angels), the Rational Soul (the *Mundus Intellectualis*) and the Body (the world before the two columns). The Rational Soul belongs in Ficino to the Celestial World, as does the Sanctuary. His interpretation on the qualities of the Rational Soul emphasises the active character of it, unlike the "Mens" and the "Idolum". As such it is the carrier of consciousness, it is the part of the soul which possesses arguing thought. Receiving universal principles from the "Mens", it can proceed from those general lines to the multiplicity of reality as is to be found in Nature. As Karl R. Wallace showed in his *Francis Bacon on the Nature of Man* (Urbana 1967) Bacon modified Ficino's position slightly, insofar that for him the *Globus Intellectualis* is the world of human understanding, placed between the Passive Intellect, the part of the mind that receives, and the Active Intellect, which rendered actual the potential. Aristotle compares this last part with light, which transforms "Potential colours into actual colours". Where the Active Intellect, or Wit, illuminates the understanding, the contours of the reality of the corporeal world become visible. This can be seen in the frontispiece, where the "*Mundus Intellectualis*" is shown as co-terminous with the corporeal world, the whole material of natural history, of the *Sylva Sylvarum*.

The contours are defined clearly and the continents and geography of this world has become visible. Where the light of the Angelical Mind, of the Active Intellect, ceases, the world is in shadow thickening to obscurity. This is the sphere where the understanding or rational soul is still haunted by the Idols of the Mind, Tribe or Theatre, by the *idolum* of Ficino's terrestrial part of the mind. In the frontispiece we see that the way to understand the material gathered in the *Sylva Sylvarum* is equated with the material of *Sylva Sylvarum* itself, be it in its "illuminated" state. Not through divine contemplation, but through rational understanding will the scientist advance his art through nature, through the *Sylva Sylvarum*.

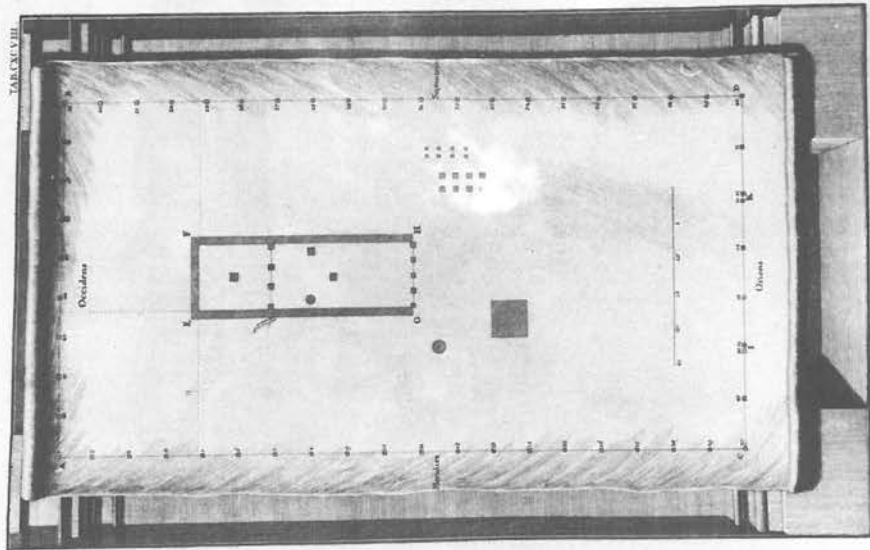
Structured on the lines given by Cosmic Temple we see in this

frontispiece in fact an emblem of Bacon's method of science, of his way of going through Nature. This frontispiece, preceding the one work where Bacon did not explain his ideas on method and organization of the advancement of the Natural Arts, is in fact a memory image of all that he had argued for in his earlier works. It is presented to the reader of the book as a guide of how to treat the assembled material. It is a "conceit intellectual reduceth to an image sensible (Works III, p.398-9)". It does not show the structure of the book as it is, but how it should be used, how one should journey through the material. Frances Yates has shown the importance of the Art of Memory in Bacon's scientific method in her *The Art of Memory* (London 1966). Here, in fact in the first work where he had to apply his theories himself to reality, it has become the determining factor of the organization of the book, as a Temple. As such is the heavenly, angelical New Atlantis the fable which stirs our Active Intellect. This activation will illuminate our understanding, our Rational Soul, in its journey through the material of *Sylva Sylvarum*. Also the other way around; the journey through *Sylva Sylvarum*, or in other words the activities of the Rational Soul, of understanding the material, will communicate its consciousness to the acts of pure thought, to New Atlantis. It is in fact the credo that the scientific advance through the Sanctuary will create in one day the reality of New Atlantis. As is method the key factor to understand the House of Solomon, so it is the key factor to understand the whole Temple of this book. The Temple of Solomon has become here the Temple of "Scientific Method", or of the ideal Baconian mind.

Starting with a discussion the imagery of New Atlantis, I have tried to show the structural relation between the various parts of the totality of the frontispiece, *Sylva Sylvarum* and New Atlantis. Since each element belonged to one of the following spheres of the Universe - the columns of the frontispiece is the Terrestrial Forecourt of the Idols to be passed, the *Mundus Intellectualis* is the Celestial Understanding which will journey through the *Sylva Sylvarum* while the Empyrean Wit of New Atlantis illuminates all and is in the same time the goal of all activity - it can be understood why Bacon used elements in his imagery of frontispiece and New Atlantis derived from the cosmic interpretations of the Temple of Solomon. It was

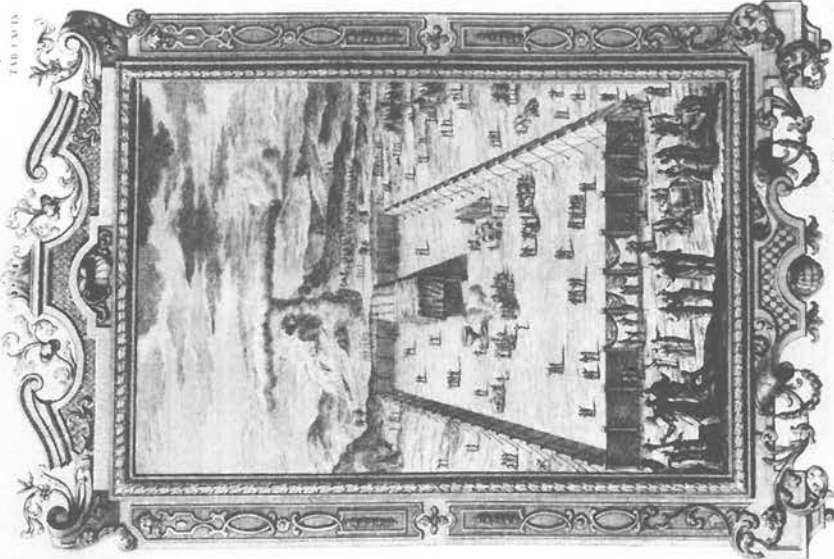
the logical next step after aphorisms in that he intended to build in the understanding of Man the Holy Temple built after the model of the world, or of image as passing from forecourt of fixed opinions to the inner chambers of the reality of Nature. The use of the Temple-image structured the Terrestrial, Celestial and Empyrean elements of his method and writing in one frame, which possessed "par excellence" the idea of advancement, of progress. It was to this Temple that the frontispiece directed the mind of the educated reader in the seventeenth century. It showed a cosmos confronted from one side by Man and from the other side by God. As this Nature is not a deity to be feared and worshipped, but a Sanctuary to go through, to use thereby fulfilling the design of Man, it is in this Biblical view of Nature that the Biblical architecture of the Temple plays a fundamental, supporting role. The importance of this support will be clear through the example of Bacon's use of the theme: in its universal aspect it is in the cosmological temple that the irreconcilable can be united, be it religion and science, the road and its destination or method and the material to which it must be applied.

Returning at last to Manuel's conclusion and our adaptation of it, we can perhaps discern clearer now the 'healing' qualities of the cosmic structure of Solomon's Temple and Moses' Tabernacle, and feel something of the passion with which it could be applied to almost any given situation. Our final observation must therefore be that we find in the Philonic Tradition in Architectural Thought not only some literary tradition or metaphors which served to structure our position in the world, as individual men on our way to God, as God's people placed in history or as Mankind confronted with Nature, but that we even may well find here one of the great triumphs in the history of an architecture, designed to serve Man.



EXORDIUM CAP. XXXII. v. 9. 10.
 Aera et Tabern. Ichneographia.

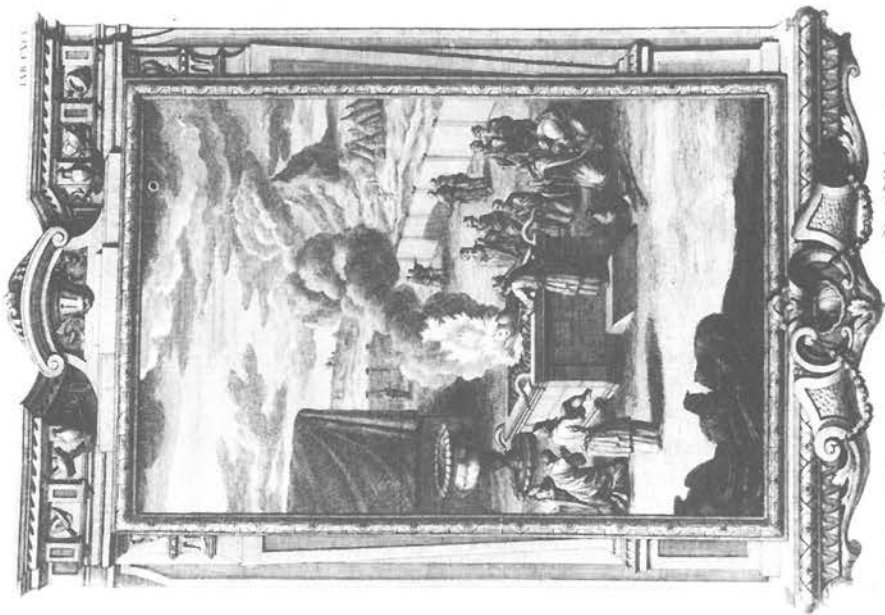
EXORDIUM CAP. XXXII. v. 9. 10.
 Aera et Tabern. Ichneographia.



EXORDIUM CAP. XXXII. v. 9. 10.
 Aera et Tabern. Ichneographia.

Plan of the Tabernacle.

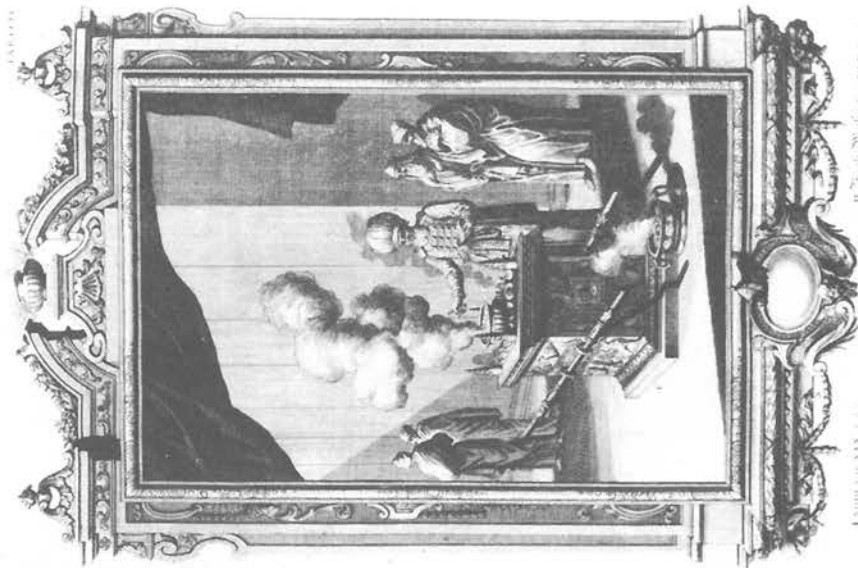
General view of the Tabernacle in the desert.



TAB. XVII.

FROM THE TABERNACLE.
 Altar in the Forecourt.
 After the Manner of the Ancients.

1794.



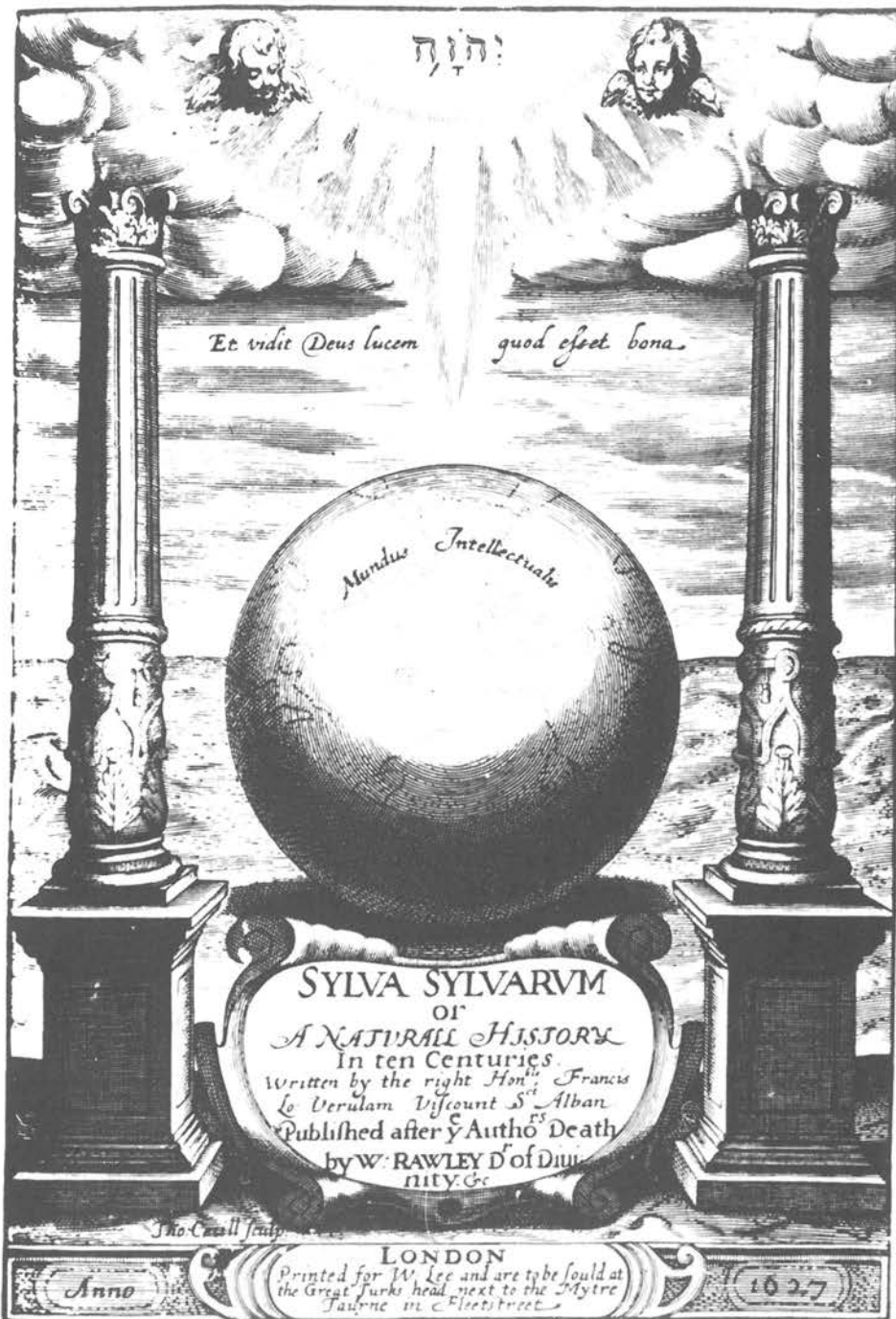
TAB. XVIII.

FROM THE TABERNACLE.
 Altar in the Sanctuary.
 After the Manner of the Ancients.

1794.

The altar in the Forecourt.

The Altar of Incense in the Sanctuary.



Frontispiece of *Sylva Sylvarum* (London 1627).