4.4. Introduction to Current Philosophy. HIVO Antwerp 1980-1981 (228 p.)

4.4.1. part I, p. 1 to 100

Preface on the philosophical currents since pagan Hellenistic philosophy.

(A) The Patristics. (1/8)

It suffices to consult *Cl. Tresmontant, Introduction à la théologie chrétienne*, (Introduction to Christian Theology), Paris, 1974, to see that ecclesiastical Christianity possesses 'a logic (and epistemology), 'a (meta)physical and 'an ethics-politics, his own.

Steller says that he sets out, in a first volume, what Judaism, Christianity and Islam have in common, namely the doctrine of revelation, God and creation. After all, all three are a kind of monotheism (doctrine concerning the one God).

Christianity and Islam emerge from Jewish monotheism, but they differ: Christianity is characterized by its doctrine of the Holy Trinity and Jesus' incarnation and develops, on the basis of its own characteristics, its own conception of man (anthropology), which Tresmontant expounds in the three remaining parts of his book.

The main contents of Christian philosophy.

Cl. Tresmontant, La métaphysique du christianisme et la naissance de la philosophie chrétienne, (The metaphysics of Christianity and the birth of Christian philosophy), Paris, 1961 (smaller conceived: Cl. Tresmontant, les idées maîtresses de la métaphysique chrétienne, (the main ideas of the Christian metaphysics), Paris, 1962), addressing himself to E. Bréhier, Histoire de la Philosophie, 1926/48), who, while calling Christianity 'an exasperating mental revolution, after the Neo-Platonists, but seeing no real philosophy in it, claims, that, from the Jahwist text (from the IXth century before Christ; see book of Genesis), up to the canons of the first Vatican Council (1870), one uninterrupted metaphysical doctrine is expressed in a historical growth process, with propositions on being and the kinds of being (as uncreated/created, one/many, becoming, substance, time, human and human soul, body, freedom, thinking, acting etc.).

In other words, Christianity takes a stand on philosophy and is ipso facto a philosophy.

Patristics" is that philosophical thinking which characterized the Church Fathers (and the laymen who thought along with them) in late antiquity. As a strict philosophy, it shows neither systematic nor genetic (developmental) unity: the philosophical contents are woven into Christian life and into its theology, except in the case of a few, including S. Augustine of Tagaste (354/430), who develop philosophy independently and thereby anticipate the second great ecclesiastical form of thought, namely scholasticism.

"The philosophy of the Church Fathers or patristic philosophers is best treated with medieval philosophy." (M. De Strijcker, Concise History of Ancient Philosophy, Antwerp, 1967, p. 10); which, in my opinion, is only partially correct, because of the different cultural context.

HW₂

Overview.- The Patristic period (+33/+800) exhibits a threefold periodization.

(a) 'Initial patristics (33/325).

Paul, as a man of general education, knew Hellenic philosophy and exhibits Stoic elements where he formulates the proof of God from the fusus (nature) and the doctrine concerning the moral law and conscience, located in the fusis (nature) of man.-

John works with the concept, 'Logos' ('word, better: world wisdom) which he applies to Jesus (borrowed from Herakleitos, the Stoa and Philon the Jew); he also exhibits Gnostic traits, but ecclesiastically processed.

Main content initial patristics: apologetics (defense of the faith);

1/ against pagan polytheism (polytheism), as the Neo-Platonists especially, along with all the theosophists from paganism, advocated it and

2/ Against Gnosticism, which was not satisfied with the current religions of pagans, Jews and Christians, but, above that, wanted "gnosis" (knowledge), understand: speculative-philosophical knowing, from an existential experience.

Clemens of Alexandria, (.../215) opposes the overgrowth with fantastic and imaginary contents of thought of the Gnostics, the ecclesiastical and Biblical "gnosis": this departs from the pistis (ordinary faith) to grow into gnosis, truly philosophical knowledge, which,

- (a) based on the seven free 'arts' of Alexandrian enkuklios paideia (arithmetic, geometry, music, astronomy,- Pythagorean heritage; grammar, rhetoric, dialectic, sophist heritage),
 - (b) sophia, philosophy, will,
- c) but crowned, as with Philon the Jew, by Biblical "wisdom" (what we would now call theology). All this centered around Jesus as Logos, worldly mediator between the Father God and this world.

Origines of Alexandria (.../254), pupil of the pioneer Clement, in the East, and Lactantius (250/325) in the West, elaborate a first systematic exposition of Christianity. - With Origins, there is a strong syncretism: (he assumes a creation without beginning, as well as the prior existence of the soul (in relation to the body), the prior guilt of the soul (and its bodily involvement by virtue of that guilt) and, finally, apokatastasis (the redemption of all beings, including sinners, in a general restoration at the end of time). This did not prevent him from being a friend of many Eastern bishops and a preacher much sought after by them.

(b) Fully developed patristics (325/450)

Main content now is the dogmatic doctrinal content (dogmatics, i.e. coherent exposition of the dogmata or doctrines) as it emerges from the struggle with the heresies and schismata.

Main characters: Gregory of Nussa (335/394) who clearly distinguishes faith and natural knowing, yet conceives of science as faith-friendly and knows methodical doubt;

HW₃

Augustine of Tagaste (N. Africa) (354/430), who began as a rhetorician (cf. Proto- and especially Deuterosophism), became a Manichaean and ended up in Scepticism, until, in 387, under the influence of Neoplatonism, he converted to Christianity. As bishop of Hippo he wrote his main work *De civitate Dei* (On the State of God), which contains a Christian philosophy of history and theology. He had a huge influence on Scholasticism.

(c) Blooming patristics (450/800).

The migrations begin: between 375 (Hun invasion) and 568 (Longobard settlement in Italy) these shifts are situated which lead to the fall of the Western Roman Empire (476: deposition of Romulus Augustulus by Odoaker) - Mohammed (570/632) founds Islam: in 633, the battle of Qaddisieh takes place (the Muslim Arabs (// Iraq) defeat the Sassanian Persia (// Iran),- proving with what speed the "holy war" is turning the East around).

Consequence: cultural decline. - Main content of Patristics: preservation of the acquired.

To note for the East: Dionusios the Pseudo-Areopagite (+/- 500), who Christianizes the Neo-Platonism of Proklos, who was called the ancient or antique "scholastikos" (410/485, a Constantinopolitan); Dionusios is a mystic who has a great aftereffect on the Scholasticism; further: John of Damaskos (.../749) the great systematizer, who thinks Aristotelian in Neo-Platonic center.

For the West: Boëthius of Rome (480/525), in 510 minister of Theodoric, king of the East Goths, with whom he later fell into disfavor because of his Catholic conviction (Theodoric was an Arian heretic); Boëthius studied philosophy in Athens and recognized the cultural value of the Hellenic philosophy and sciences for the emerging Italo-Gothic culture; he reconciled Platon and Aristotle (introduced a series of Aristotelian terms into the West); besides Augustine, Boëthius is the leading authority in the early Middle Ages. He reconciled Platon and Aristotle (introduced a series of Aristotelian technical terms into the West); next to Augustine, Boëthius is the leading authority in the early Middle Ages.

The philosophical choice of ancient Christianity.

In itself, with Jesus of Nazareth, surrounded by his' apostles as his' disciples, whom he taught as his' master, Christianity was one of the many Eastern Mediterranean religions of salvation (mysteries).

Initially the Anatolian-Greek mysteries (Dionusos-Bacchus, Kubele-Attis, Sabazios (// Dionusos but Thrakic-Frygian) and the Egyptian (Isis, Jupiter-Amon (or Jupiter-Amoen of Thebes in Egypt)), later the Syrian-Persian' (Jupiter Dolichenus (of Doliche, 'a northern Syrian city), parallel to Jupiter-Amon, especially Mithra(s), 'a Persian deity, center of a strongly monotheistic and ethical, end-time-oriented religion), on in the Roman Empire.

For Christianity, these mysteries were at once parallels and antagonists.

The mystery nature of Christianity.

The Easter Liturgy of the Byzantine Church has a beautiful text, in which the basic position of Patristics is expressed: "In the Holy Spirit is the wealth of knowledge of God, of sight and of wisdom. For all the doctrines of the Father reveal the Word (logos) in Him (i.e. the Holy Spirit)". Knowledge of God was pursued by all theosophies, in one form or' another; well, that knowledge of God is situated in the third person of the Holy Trinity, and in its full 'richness'. This knowledge of God is more than vague experience; it is 'doctrine' (didachè, doctrina) and, as a collection of teachings, comes from the first person, the Father;

In other words, there is a real intellectual-doctrinal aspect to this knowledge of God, even if it is more than purely intellectual thought content. This is already evident from the word 'beholding' (theoria, speculatio), which is sensory experience but at the same time penetrates to the essence of what is beheld; beholding is seeing, hearing, touching, but, while seeing, hearing, touching, grasping the deeper essence of what is seen, heard, touched.

Thus there is a text, in that same Easter liturgy, which says: "Let us cleanse our senses, and we shall behold Christ as he shines forth in the inaccessible light of the resurrection." It is the ancient meaning of beholding that applies here! (Cf. *Kilian Kirchhoff, Osterjubel der Ostkirche, Erster Teil des Pentekostarion*, (Easter Jubilee of the Eastern Church, First Part of the Pentecostarion), Münster (Wf.), s.d., S. 251, 3).

Theosophy thus becomes Triadosophy, Trinity Wisdom;

Which implies that some representations of Christianity are one-sided.

1/ Thus *P. Cerfaux, Jesus aux origines de la tradition*, (Jesus at the origins of the tradition,), DDB, 1968. In this fine book, The author describes the content of Christianity as centered around Jesus as teacher (the primal orthodoxy, the so-called Galilean tradition) and as dying and resurrecting (the Paschal Mystery, the so-called Jerusalem tradition) savior. The active role of the Father and of the Holy Spirit does not come into its own.

2/ Similarly, J. Millet, Dieu ou le Christ? (Les conséquences de l'expansion du christocentrisme dans l'Eglise catholique, du XVII ème siècle à nos jours). Etude de psychologie sociale, (God or Christ? (The consequences of the expansion of Christocentrism in the Catholic Church, from the 17th century to the present day, Study of social psychology). Paris, 1980, pp. 9/56, where there is talk of 'a "religion bipolar," a bipolar religion centered around faith in God and faith in Christ. The God pole comes from Judaism (the God of Abraham, Isaac and Jacob), reinforced by the (monotheistic current in) Greek philosophy; the Christ pole comes from the Gospels.

It is clear that the Father is central to the Jesus movement and the Pentecostalism that was the first church; in other words, the three, without competition among them, Father, Jesus, Spirit, constitute the "essence" of Christianity. Previous representations are therefore very one-sided approaches to primal Christianity, however engagingly written.

Contemplation is only a first stage: 'wisdom' (sophia, sapientia) is the second, i.e. ethical-political praxis. Christianity is 'theiosis', deification, of humanity (and the cosmos) after the model of the Holy Trinity. And this includes, in addition to micro-morality (individual aspect), also macro-morality (the social aspect): "They possessed everything in common" says *S. Luke* (*Acts 2: 44/45*), - point to which *Fr. Engels, Der Deutsche Bauernkrieg*, (The German Peasants' War,), a.o. chap. II, alludes ('urchristliches Gleichheitsverhältnis unter den Mitgliedern der Gemeinde', primordial Christian equality relation among the members of the congregation).

The question arises, "Where do we 'glimpse' the Holy Trinity?"

In liturgy. Not for nothing is Christianity a mystery, i.e. a religious community which more than in catechesis - in liturgical encounter, contacts the highest instance of the universe, and this in the cultic drama of the liturgical year and its circular return, as mystery theology (*O.Casel*, OSB (+1948), *Glaube*, *Gnosis*, *Mysterium*, Münster (Wf), 1941; *I. Herwegen*, OSB (+1946) and others) has taught us.

The dramatic portrayal - re-experienced in the sacraments and sacramentals of the Church community, which constitutes the People of God - makes the primal events of Christianity visible. "The religious consciousness of the Christian - in contrast to the purely mythical mysteries of the pagans, which the author has just mentioned - has as its central point a historical content, an act of God, which the apostles and disciples had experienced.

The message, news, message: the Messiah has come; the Kingdom of God has been established; eternal life is accessible, - that message was that which ignited in the hearts and worked the rebirth of men; here everything is presence, graspable fact, experience." (O. Willmann, Geschichte des Idealismus, II (Der Idealismus der Kirchenväter und der Realismus der Scholastiker), (O. Willmann, History of Idealism, II. (The Idealism of the Church Fathers and the Realism of the Scholastics)), Braunschweig, 1907², S. 4).

This historical realism forms the background of the liturgical mysteries of Christianity; but these are more than that: they present 'mustikos, sacramentaliter', in a rite, i.e. a power-laden material act, which i) imitates and ii) contacts in a subtle way the primordial event, which happened historically in Jesus' time.

This means that the problem of the "historical Jesus" is more, here with O.Willmann, than with 'n Ernst Troeltsch, for example, for whom everything revolved around "the threat of historical thinking, the grip of history on Christian dogma and with it the dissolution of the revelation of God in a series of historical, literary, psychological, sociological and religious-historical facts, which in the end dissolve into nothingness" *H. Zahrnt, Biblical Criticism and Faith (the historicity of the Gospels)*, Utrecht / Antwerp, 1967).

HW₆

In Zahrnt's book, 'historical'-means that which is out of touch, with what the (especially historians) make of it and 'history' means that which the (especially historians) say or write or think about it! Historical nominalism, in other words! This historical nominalism, which attaches more importance to what people make of it than to what actually happened (the actual events are merely the 'substance' that historians 'shape', 'interpret' is also at work in Bultmann's 'Entmythologisierung (demythologization) of the Gospels:

Bultmann, with Heideggerian foundational concepts among others, projects into the Gospels "mythic content.

- 1) This world, as distinguished from heaven and underworld;
- 2) death followed by resurrection and ascension;
- 3) miracles and prophecies during Jesus' appearance before or after his death,

all that becomes, declared "myth" and not "history" in the sense of really happened and lived facts); this mythical content then, according to Bultmann, belongs to be demythologized for the sake of our current post-mythological, scientific mentality, which no longer takes such childish representations (existential exegesis or scripture interpretation).

This modernist Bulmannian view contrasts sharply with what *S. Peter, Second Letter 1*: 16vv, notes: "For we have proclaimed (egnorisamen, made known) the power (dunamis) and coming (parousia, gladness, entry) of our Lord Jesus Christ not as persecutors of sophisticated (sesofismenois) myths (muthois), but as eyewitnesses (epoptai) of his glory. For when he received from God the Father honor (timè) and glory (doxa), the voice of high glory sounded to him, "This is my beloved son, in whom I am well pleased." And this voice we heard coming from heaven, when we were with him on the holy mountain."

It is clear from this text that St. Peter perfectly knew the distinction that applied at that time between religious fables ("myths") and historically lived facts, and applied it to the glorification of Jesus on Mount Thabor, precisely one of those seemingly very unhistorical events in Jesus' life.

Which, by the way, in the theosophical climate of those days, was normal: the theosophists sought miraculous facts, not stories, as *P. Festugière, La révélation d' Hermes Trismégiste*, I (*L' astrologie et les sciençes occultes*), (The revelation of Hermes Trismegistus, I (Astrology and occult sciences)), Paris, 1944, p. 65 e.g.) rightly notes. They distinguished myths very well from miraculous events. What O. Willmann, despite his good understanding of that time, does not know or too little about, with many others! Yet he brilliantly typifies Christianity:

"The following four moments of Christianity:

- 1/ The historical entry of salvation into time,
- 2/ Its perpetual continuation,
- 3/ its predestination in the history of salvation preceding it and
- 4/ its basis in the transcendent, cause aspects and practices of Christian consciousness." (o.c., 9).

Here there is no question of playing off 'a two-world doctrine against primordial Christianity: 1) 'time' (this world) and 2) 'transcendent sphere' (the other world) are the two aspects of the same experience.

Significance of the Christian mystery.

As *S. IJsseling, Rhetoric and Philosophy* (*What Happens When Spoken*?), Bilthoven, 1975, notes; there has been a twofold tradition, since Protosofistics, in Greece:

- (a) the rhetorical, brilliantly represented by Socrates of Athens (-436/-338), sophist in the meliorative sense of that word;
- **(b)** by Platon of Athens (-427/-387), "the" philosopher, as, A.M.Whitehead recalls, represented, the philosophical tradition.

Well, this two-fold tradition passes into Patristics.

- (a) We have named the top figures of the philosophical streak above.
- **(b)** as a model of the rhetorical, which pursues eloquent proclamation rather than thinking wisdom, be named Ioannes Chrusostomos (John Guldenmond) (344-/407), about whom even U. von Wilamowitz-Möllendorff spoke highly (cf. *E. von Tunk, Kurze Geschichte der altgriechischen Literatur*, (Brief history of ancient Greek literature,), Einsiedeln/ Köln, 1942, S. 107).

It should be remembered that Deuterosophism (under the so-called "good emperors," from Nerva to Marcus Aurelius, 96/180) shone, when Christianity emerged.

Two philosophical main ideas come to her forefront:

- (a) the classical one that connects to Socratic-Platonic intellectualism (or to Isocratic rhetoric), this one is strongly Platonic or Stoic in focus;
 - (b) the Theosophical, which is eclectic or Neo-Platonic in focus.

Undivided, the Patres are against Epicureanism and against Skepticism (as are the Socraticists and the Theosophists), but, contrary to some Theosophists, they are also against the Gnostic-Manichean theosophists. This is the philosophical choice of the Patristics: it builds on the mysterious nature explained above.

The direction that prevails is clearly the theosophical one. The reason is obvious: as O. Willmann, o.c., 1/3 says, the late antique "mystics" (theosophical thinkers) clustered around Platon, saw that the philosophical renewal (out of the morass of Scepticism and Epicureanism) should come from the religious corner. In this spirit, they reverently collected archaic traditions concerning the deity, the world of spirits (gods, goddesses, heroes, angels, demons), the realm of souls and the hereafter, the beginning and the end of things, the exemplars of things, the formative principles in the nature surrounding us.

All this they processed into an intellectual synthesis with what Platon (and Aristotle) had especially taught. On those deeply religious philosophies the Patristic thinkers went, but Bible-reflecting where the pagan examples had failed, i.e., where Skepticism had undermined or paganism had failed.

HW 8.

A pure example of this is S. Augustine. As O. Willmann, o.c., 279ff, says, he dealt with a double problem:

- (i) The religious materialism of the Manichaeans,
- (ii) the subjectivism concerning idea conception of the Skeptics.
- 1) Against the Manichaeans, he maintains that there is a conceptual reality, in addition to material reality (idealization of the concept, "reality");
- 2) Against the skeptics, he asserts that there is an objective mental content, besides the purely subjective mental content (objective relaxation of the concept of "mental content" or "idea"). This mental content, which is both immaterial (against the Manichaeans) and objective (extramental) (against the skeptics), Augustine calls "veritas" (truth):
 - (a) Truth is not a body or substance and yet it is real (actual);
 - (b) truth is not our subjective representation, and yet it is thought-content (ideational).

Conclusion: there 'is' something that is at once real and thought-content, that 'transcends' (surpasses) the substance and our subjective thought-contents. - Thus, in his own way, Augustine arrived at the Platonic 'idea'. In the same way, he arrived at the Pythagorean 'number-structure', 'numerus'): the immutable truth (valid for the mind everywhere and always: e.g. 3+2=5) of numbers, it is super-material and thought-content at the same time. Thus he also arrived at the sapiential domain: wisdom, present in matter; visible to the order exhibited by matter, is transcendental and - thought-content. Idea (Platon), number form (Puthagoras), wisdom (scripture) are types of truth, which are èn immaterial èn think-content reality.-- This equal central intuition has worked on the Scholastic.

Note - In *De civitate Dei Augustine* takes a stand against Rome and its culture, and this according to the cybernetic scheme of mythology and sacred history:

- (i) there is, originally, ancient Rome, which was essentially good, though less evolved;
- (ii) there came the decline of Rome, which experienced moral degeneration (and persecution of Christians), without therefore being radically evil,
- (iii) there is now, gradually, Christian Rome which reconnects with the initial ancient Rome but rises above that ancient Rome and thus improves the decayed Rome. This means that the so-called pessimism of S. Augustine had limits.

Value judgments on patristics.

- 1) Karl Marx, Differenz der demokritischen, und epikureischen Naturphilosophie (Difference of democritical and epicurean natural philosophy), (in the preface § 2) is called "der Kirchenväter und das ganze Mittelalter, die zeit der realisierten Unvernunft." Marx, as an enlightened spirit who swears by "Vernunft" (reason, rationalism), as areligious as possible, as subjective-autonomous as possible, is right in his perspective.
- 2) On the other hand, W. Jaeger says that, in the IV th century A.D., "a late Antique Renaissance of a Christian nature got under way. In which he is also right, from his point of view.

(B) *The Scholastic.* (9/17)

Scholasticism comes from 'schola', school (scholè in the, Greek meaning 'leisure', yes, also 'contemplation' (contemplatio)).

H.-I. Marrou, Histoire de l'éducation dans l'antiquité, (History of education in antiquity,), Paris, 1948, pp. 435/447, points out the emergence, from the IVth century AD, of the first Christian schools, the monastic, viz. dra, following the hard times, the episcopal schools; in the VIth century, the network of the présbyteral schools (in the outer parishes) definitively gets off the ground.

The formation of monks or clerics was the intention. In any case, Marrou argues, medieval education will be based on the system of schools that antiquity had never known in this regular, systematically generalized form, and which is nothing less than the birth of the modern popular school.

The Concept of Scholasticism.

In the strict sense this is (*A. Bolckmans, Overzicht van de wijsgerige stromingen in de wereldliteratuur*, (Survey of philosophical currents in world literature), Ghent, 1972, p. 1/44) 'a Christianly processed "classical" (i.e. Greco-Latin) culture, whereby the content is Christian but antique influenced;

W. Jaeger, Humanisme et theologie, Paris, 1956, says that in the Scholastic, the antique Greek paideia, which became "humanitas" in its Latin version, passes to the Middle Ages. Bolckmans points out the Arab-Jewish aspect, as well as the Germanic contribution.

The great contempt

- 1) of the Renaissance humanists (XIV/XVIth century),
- 2) of the Enlightenment (XVIIIth century),
- 3) of the historiography of the XIXth century, (this notwithstanding the Romantic revaluation of the Middle Ages) is a pure prejudice, which stems from narrow-mindedness.
 - 1) The Romanticism, (early XIXth century),
- **2)** the historiography of the XXth century carried out the revaluation (Bolckmans, o.c., 3/4).

The pejorative meaning of the word "scholasticism

as that method of thinking **a**) which excludes any empirical investigation, **b**) because one starts logically and strictly from revealed truths, which can never and/or may never be investigated for their truthfulness, is an arbitrary use of words which is not applicable to the real, historical, Scholastic, or can be applied to its defunct, late-Middle Ages form or simply means the same as (closed) dogmatism. This was clearly shown, for example, at the First International Congress of Medieval Philosophy (Leuven/Brussels, 1958), where the theme of 'man and his destiny', according to the Medieval thinkers, was central.

Constitution. - O. Willmann, Gesch. d. Id., II, 322ff., says that, with respect to Patristics (with its doctrine of ideas as its foundation), Scholasticism represents "a frontal change. This is double:

(i) mysticism tended to conceive of sensory reality as pure

(pantheistically conceived) deity or a hypostasized (i.e., elevated to an independent higher reality) world of ideas; in contrast, the Scholastics hold that the sensory things are true reality (independent with respect to God or world of ideas, at least minimally);

(ii) dialectics, in its overestimation of reasoning thought, tended to conceive of and manipulate the concepts as separate from reality, nominalistic thus; -- in contrast, Scholasticism holds that the intellegible, the content of thought, constitutes the objective essence of (sensory) things and is thus more than a mere product of human thought.

Both of these excesses - i) other-worldly mysticism and ii) subjectivist dialectic - Scholasticism combats, as does Aristotle and with him: the intellegiate (thinking content) in things becomes the great theme! "Sensibilia intellecta manuducunt in intellegibilia divinorum" says *S. Thomas Aquinas, Quest. Disp. De veritate*, 10:6: the sensory things, once they are intellectually processed, lead a person into the thought-content things of the divine realities. In other words, in the intellectual core of sensory natural things, the thinking-seeking person meets God's thinking order of things.

Hence O.Willmann rightly characterizes Patristics as 'Idealismus' (i.e. theory of ideas) and Scholasticism as 'Realismus', i.e. conceptual realism, which assumes that our understanding of (sense) things corresponds to the intellegious (thought-content) structure of things itself: things are 'sense' perceptible thought-contents (ideas, in the Platonic language, but without any too transcendental of them). This means that Patristic 'idealism' (better: theory of ideas) returns in its more realistic form in scholastic (idea realism.

"It is therefore 'a 1/ by ideas and 2/ on the highest plane, by faith oriented realism that characterizes true Scholasticism, according to its mentality, the continuation (i) of the philosophy' of the Church Fathers and (ii) ultimately of the speculative elements of Holy Scripture - according to its execution, the opening up of new areas for the application of thought-content principles." (O. Willmann, o.c., 324).

Not only is genuine Scholasticism an improvement of mysticism and dialectic in its one-sidedness;-it is also its synthesis: genuine Scholastics were at once dialecticians (thinkers of the "schola") and mystics (contemplatives of monasteries and places of worship), yet gifted with a strong sense of the natural things surrounding them.

The sources of scholasticism.

(i) Neo-Platonism, via Plotinusvan Likopolis (203/269), Proklos of Constantinople (410/485) and, later, via the Islamic and Jewish philosophies, via, also, the Patres = viz. Pseudo-Dionusios Areopagita and S.Augustine (Manichean, Skeptic, Neo-Platonic above all.

(ii) Aristotle, through Boëthuis of Rome, who gave Italo-Gothic culture a philosophical foundation; also through the direct writings of Aristotle himself, which was translated entirely into Latin around 1150; through the Islamic and Jewish philosophers, insofar as they Aristotelianized.

The three nonscholastic philosophies of the Middle Ages.

To a proper understanding of scholasticism, here is a schematic overview.

(i) Byzantine philosophy.

W. Jaeger, Humanisme et théologie, Paris, 1956, speaks of the Byzantine revival ('Renaissance') in the IXth century (Fotios (820/891), whose influence reached as far as Bulgaria, Moravia and Russia); later, Michael Psellos (1018/1078) and others - paraphrases and commentaries on Aristotle and Platon, strongly traditional, characterize Byzantine philosophy.

(ii) Islamic philosophy.

The Arabs (especially of the North), aided by the Jews, benevolently received by some Christians, took advantage of the weakness of Constantinople and Persia and pushed on, westward (Carthage fell in 698, led everywhere by the Jews, persecuted minority, Spain was conquered from the Goths, from 711) until the Frankish infantry, under Charles Martel, defeated them at Poitiers in 733, - as they remained silent before the walls of Constantinople in 717/718. From 730/740, the Southern Arabs (Hedjaz) emerge in the East (Abbasids): they fan the Koran in Syria and Persia and founded a five-century empire (1/ Arab army, 2/ Islamic fanaticism, 3/ Persian culture).

The Koran itself is a syncretism of (i) Bedouin religion (strongly erotic and aggressive), (ii) Jewish religion, which provides structure, and (iii) millenarianism, i.e., belief in the foundation on earth of a Muzlim Messianic empire, fanatically anti-Christian.

Culture (Baghdad especially) is the work of local, pre-Islamic elites, who, among other things, translate Greek philosophy from Syriac (Damaskos) into Arabic. After all, after the closure of the Neo-Platonic school at Athens in 529 by the Christian emperor Justinian, Greek philosophy moves to Damaskos (Syria) and speaks Syriac. After the crushing the Omeyads (N. Ar.) around 750, it moves to Baghdad, where the Persians translate it into Arabic. Philosophy has remained foreign to Islam.

East: Al-Kindi (.../873) is the first Arab thinker of Greek inspiration. Al-Farabi (.../950) is the first logician and is more mystical ('n Sufi: Sufism is the theosophical streak, foreign to Islam but practiced by the Turk Al Farabi); Avicenne (= Ibn Sina; 890/1037, from Turkestan) with his Book of Healing, 'n philosophical encyclopedia, Aristotelian-Neo-Platonic; he was hand and foot masseur.

(cf. A. de Sambucy, Le massage vertébral (massage Suédois et Chinois, manuel et pédestre) (Spinal massage (Swedish and Chinese massage, manual and pedestrian)), Paris, 1972, book dedicated to Avicenna, among others); Al-hazen (.../ 1038), psychologist on seeing (physiologically based); Algazel (= Gazali; (1059/1111) 'n Pers who is more philosophically skeptical yet mystical).

West: Avempace (.../1138); Aboebacer (= Ibn Tufail; .../1185); Averoës (= Ibn Rosjd, 'n Berber in Andalusia (Cordova) (1126/1198), judge and physician, who wrote a rich commentary on Aristotle, yet to formulate his 'own doctrine.

(iii) *Jewish philosophy*. This one is double:

Jewish philosophical theology.

Isaak ben salamon Israeli (845/940); Saadja (892/942), founder of Jewish philosophy of religion; Avicebron (= Avencebrol or also Ibn Gebirol), in Spain (1020/1070), 'a Neo-Platonist; Moses Maimonides, of Cordova (1135/1204) 'an Aristotelian, with great influence on scholasticism.

Kabbalistics.

Cf. Gershom G. Scholem, Les origines de la Kabbale, (The origins of Kabbalah,), Paris, 1966 (Dt.: Ursprung und Anfänge der Kabbala, Berlin, 1962) the Kabbalah originates in Provence (Languedoc), where there is a contact between the Islam culture (from Spain and North Africa), on the one hand, and, on the other hand, the Christian knight culture (troubadours), but the latter is mainly dualistic (Cathars, Albigenze, in direct relation with the Bulgarian Bogomiles: it contrasts, in a Gnostic-Manichean sense, the true God, creator of soul and thought, with Satan, creator of the visible world and body). This between 1150 in 1220. In the first quarter of the 13th century, Kabbalah expanded into Aragon and Castile (Spain), where it became "classical.

The Zohar, the most comprehensive kabbalistic work, dates from the last quarter of the 13th century. Its teachings differ from the earlier Jewish gnosis (Merkaba mysticism) and from German Hassidism (XIIth/XIIIth century.

The Kabbalah is twofold: (i) speculative-wise and (ii) magically practical (the Hebrew words and letters are central). The Kabbalah has also had Christian interpreters, in theosophical circles.

Conclusion. It is sometimes said that the medieval mentality was 'narrow' and 'narrow-minded': as we can see from the information sources of scholasticism, there was indeed a plurality of methods and a pluralism at the time.

Typology and periodization of scholasticism.

Six periods characterize scholasticism, of which a meager outline now.

(a) *The prescholastic* (prescholastic: 700/900).

The Carolingian renaissance, a revival the Latin literature in the VIII-th /IX-th century, in the realm of the Franks (Alcuinus (730/804) and Johannes Scotus (= Eiugena) (810/877), the founder of the first great Middle Ages system in neo-platonic language, later though contested, prepare.

(b) *The early scholastic* (1000/1200).

After the 'dark' tenth century revival, - (the French renaissance of the XIIth century). - The relationship between faith (i.e., theology and the content of Christian life) and methodical thinking, called "dialectics" (i.e., logic) - the dialecticians roamed the country, as did the Greek sophists at the time (cf. *C. Verhaak, Zin van de studie der middeleeuwse wijsbegeerte*, (Sense of the study of medieval philosophy), in *Tijdschr. v. Phil.*, 1962: 41, 55) determines spiritual life. Especially the meddling of the dialecticians on the question of universals.

The problem dates from **i**) Porfurios, the pupil of Plotinus, and **ii**) Boëthius and deals with the categoremen, predicabilia (i.e. genders (teacher), species (head teacher), species distinction (school leadership), property (presiding over meetings), concomitant (a pointed beard)) called universalia because they concern generality (universe, **a**) the whole and **b**) all cases).

Digression. Three major positions on universals with respect to their reality value (epistemological side).

(i) The nominalist Roscelinus (1050/1125).

- S. Anselmus of Canterbury (1033/1109) says of him that he conceives of the general essentials or essences only as 'flatum vocis', 'a breathing of the voice': neither in the real world nor in thought is there such a thing as a universale; it is only a name (nomen, nominalism);
- (a) the many individuals of a species are one (under one name) by virtue of a subjective act and
 - (b) the many parts of a whole are one (whole namely) in the same way.

It should be noted that modern nominalism (Locke, Berkeley, Hume, - later Stuart Mill, Spencer, - Wundt, Mach et al.) speak of sense schema rather than truly general, "abstract" concepts or universals.

(ii) William of Champeaux (1070/1121),

pupil of Roscelinus of Compiègne, who was for a time an ultra-realist (change from nominalism to ultra-realism)):

1) the universal is not only in (word and) understanding, 2) it is not only in the concrete thing (as its being); 3) it exists for both in 'a thought-content world, which is substance, hypostasis i.e. reality in itself from which the concrete thing derives reality (one compares with Platon's ideas, for things).

(iii) *Petrus Abelardus* (1079/1142),

also a pupil of Roscelinus, the most influential thinker of the XIIth century, is a (moderate) realist: 1/ the universal is not only 'post rem', (after the thing), as for the nominalist; 2/ it is also not essentially 'ante rem' (before the thing), as for the ultra-realist; it is 'in re' (in the thing), in an individual way and 'post rem' (after the thing) in an intelligible way (one compares with Aristotle's forms in the things of nature).

The scholastic method.- The Quaestio (question) is the object of the Disputatio (discussion). The method begins with sic et non (yes and no).

The evidence (arguments) for and against the answer to the question are set forth, usually by means of 'auctoritates' (figures of authority), one after the other. This as an expression of methodical doubt (practiced at the time 1) by the new academy, 2) Gregory of Nussa (335/394) and Augustine of Tagaste (354/430), long before R. Descartes' doute méthodique. This is followed by justification with its own opinion and position. Aristotle also proceeded in this way. The whole ends with the refutation of the counter opinion. Abelardus is the founder and S. Thomas Aquinas (1225/1274) the finisher of the scholastic method.

In addition to method and dialectic questions, it is possible to note:

(i) the school of Chartres (three directions), (ii) mysticism, which meant inner contemplation and experience of religious realities (Bernard of Clairvaux (1099/1153), founder of medieval mysticism, the opponent of the rational Abelardus; - the Viktorines) and (iii) the Sententiae, d.i. collections of texts of Bible and Church Fathers (Petrus Lombardus (.../1160) makes them gradually systematic expositions) and the Summae ('n Summa is a systematic exposition of theology and philosophy well furnished with the rational evidences).

(c) The highscholasticism, its heyday. (1200/1300)

- 1) The entire Aristotle is processed along with the Arabic commentaries;
- 2) the universities are founded, with its four 'facultates', with its lectio and disputatio;
- **3**) the mendicant orders, Franciscans and Dominicans develop its intellectual work. A great wealth of strains exhibits itself:
- (i) *The traditional, Augustinian direction* which, notwithstanding thorough knowledge of Aristotle and the Islamic-Jewish philosophies, nevertheless remains faithful to Augustine (see Patristics); Henry of Ghent (.../1293);
- (ii) *the new, Aristotelianizing streak*, which either adheres integrally to extra-Christian Aristotle (Siger of Brabant (1235/1284) or makes a Christian-processed synthesis (S. Albert the Great of Bollstädt (1200/1280) and especially, the grand master, S. Thomas Aquinas (1225/1274) who gives existence to Thomism;
- (iii) *the Skotic school*, which criticizes Thomism it: John Duns Scotus (1266/1308), who emphasizes voluntas (will) rather than intellect;
- (iv) *the Neoplatonic direction*, which already broke through with Albert the Great and the older Thomas Aquinas, but which triumphed in Germany in particular (in the Dominican order): Master Eckhart (1260/1327), the founder of speculative mysticism, i.e. the intellectually thought-out mystical experience, in the West;
- (v) the natural science streak, advocating mathematics and experimentation: Roger Bacon (1210/1292)

(vi) *The logical streak* studied in logistic middle since +/- 1930:

- "It is (...) Lukasiewicz who has made known the originality of medieval logic, by which at present its only peculiarity is generally recognized, which latter has existed both in (...) explicitizations and in new acquisitions." (*R. Claeys, Overzicht van de evolutie der logische theieën van de antheid tot heden* (Survey of the evolution of logical theories from antiquity to the present), Leuven, 1974, p. 136). Logic was, with grammar and rhetoric, the third part of the trivium (from antiquity) and therefore vernacular (not calculative).
 - 1) The Logica vetus (ancient logic) goes as far back as Abelardus (1150);
- 2) the Logica nova (new, viz. because one had discovered all the logical works of Aristotle) from Thierry of Chartres (.../1150) onwards
- **3)** The Logica Modernorum (the "terministic" logic; cf. Petrus Hispanus (later Pope John XXI (1215/1277) the new type of logic;
- **4)** The Grammatica speculativa (investigation of the relationship between logic and grammar) with Roger bacon and Thomas of Erfurt;
- (vii) Raymondus Lullus (1235/1315, poet, philosopher, theologian and mystic, advocates an Ars generalis (general 'art' (understand: subject science)), i.e. a system of first basic notions a basic judgments, from which, by combinatorics (transformation of the structure) and mechanical operations, the special sciences can be deduced: by this Lullus is the forerunner of *Leibniz* (1646/1716) with his *Ars combinatoria* (combinatorics) and the XIX-d' century logics.

(d) *The Late Scholastic* (1300/1500).

Preliminary examples include Petrus Aureolus (1280/322), who adheres to conceptualist nominalism:

- 1) the conceptualist distinguishes himself from the older nominalist by assuming not only the common name but also the common concept valid for all cases.
- 2) yet he is not a conceptualist, in that he claims that nothing in the real thing corresponds to this (the general concepts of the conceptualist are comparable to the sensory schemata of the modern nominalists, yet more abstract).
- (i) The Franco-German War (1339/1453), the great plague, the Western schism, the multiplication (and permitting) of universities;
- (ii) the authoritarian suppression of freedom of thought in the (mendicant) orders; the increasing ignorance concerning the great thinkers of the past; the broadening of language; the shrewdness; all this drives scholasticism toward its decline.
 - **1.** The via antiqua (the old method):
- **2.** The via moderna (the modern methods), which disintegrates the harmony between Christian faith content and method of thought, again, has as its central figure William of Ockham (1300/1350), Franciscan monk who is anti-Papist and claimed freedom of thought for philosophy. He is a conceptualist (// Petrus Aureolus) or 'terminist'.

I.e., that, for William, the object of reality studies are the concepts, (called terms). The nominalist school, in its wake, reinforced, on the one hand, the septic tendency and, on the other hand, engages in natural science, especially in Paris and Oxford, where one partially breaks away from Aristotle and makes independent observations (John Buridan (1300/1358) and Nicholas of Oresme (1320/1382); it also engages in logic, especially in England.

- **3.** Late Averroism (see Spanish thinker above p. 13).
- **4.** Late medieval mysticism:
 - 1. Eckhartian (including our John of Ruisbroeck (1293/1381) and
 - **2.** Viktorin (Johannes Gerson (1363/1429), opponent of Ruisbroeck).

Value Judgment.

European rationalism is convinced that faith is 'an un- or underdeveloped stage of knowledge(s) and cognitively (informatively) inferior; - that religion as a method of thought is 'an immature and immature (meta)-physics and that theology, insofar as it has value, is only a philosophy that does not know itself.

Consequence: epochs in which religion and faith co-determine thought are at best preparatory stages of true science and metaphysics. Therefore, the classical rationalist cannot possibly appreciate the Medieval Ages, indeed he must say with Karl Marx that the entire Medieval Ages are "die Zeit der realisierten Unvernunft," the epoch of the realized unredeemed.

It is also claimed that the Middle Ages thought "authoritatively. W. Jaeger Hum. Et théol., 112, notes that S. Thomas says: "What, however, is of all this, need not cause us much concern; for the study of philosophy serves not to know what men think about it, but how the truth of things stands." (Ep. In libr. Ar. De coelo et mundo, Lib. I, 1. 22, 8).

(e) Modern scholasticism,

Modern scholasticism, after the medieval one, is the silent continuation of the medieval one in the ecclesiastical middle, especially in Spain and Italy in the XVI- th and XVII- th centuries, after the Renaissance and the Reformation. It examines the earlier scholasticism for its value, applies it to modern issues (e.g., social studies and philosophy of state).

(f) The Neo-scholastic

It arises, when in the XIX century, modern rationalism in the philosophical field but also in the theological field threatens revealed thought. In Italy (Buzzetti, Sordi, Tongiorgi, Taparelli, Zigliara), in Germany (Kleutgen), the movement starts. The *encyclicals* (*Aeterni Patris* (1879: Leo XIII), *Studiorum ducem* (1923: Pius XI), *Humani generis* (1950: Pius XII) were decisive. Center are mainly the higher institute of philosophy (Leuven) and the Catholic Universities. All areas of philosophy, all philosophical currents since the Renaissance, have been initiated Neoscholastically.

Concluding remark: the prime suspect of the Middle Ages.

P.L. Landsberg, Die Welt des Mittelalters und wir (Ein geschichtsphilosophischer Versuch über den Sinn eines Zeitalters), (The World of the Middle Ages and Us (A Historical-Philosophical Attempt on the Meaning of an Age)), 1925-3, attempts to formulate the main idea succinctly:

"The central insight, from which thought, worldview and philosophy of the Middle Ages become intelligible, is

- (i) That the world is a cosmos,
- (ii) that that world is a meaningful and gracefully ordered whole that moves quietly according to eternal laws and orders, which, springing from God as the first beginning, also pertain to God as the last endpoint." (o.c., 12).

It is easy to see how ethics fits into a philosophy of order: if the world is one great harmony, then man has the law to move in that order; if it is conceived according to a divine plan, then he has to conform to it. Thus, in the scheme of Thomas Aquinas, after the book on God and on the divine world creation and world order, follows the book on the movement of the soul towards God (the Christian ethic)." (o.c., 17). "Ordo naruralus (natural order) and ordo moralis (moral order) go together, with Thomas." (o.c., 21).

The second principle, resulting from the first two, is the balance in opposition: "Thus the

- (i) the medieval conception of God both transcendentalism (i.e., excessive elevation of God above creation) and pantheism,
 - (ii) solidarism both individualism and collectivism,
 - (iii) the Christian world valuation both pessimism and optimism,
 - (iv) the medieval criminal law view both retribution theory and deterrence theory,
 - (v) the reasonable ethos both militarism and pacifism". (o.c., 105).

"The word 'cosmos' and the idea underlying it, which we have looked at (...) in its specific medieval scholastic form, is first found pronounced among the Pythagoreans, who wished with it to grasp philosophically either consciously or unconsciously the dimensional lawfulness of Greek life and of Greek art at a narrow peak, the middle of the sixth century." (o.c., 47).

Third Ground Draw:

- 1) "Now it also belongs to the peculiar nature of the Middle Ages that, outside the church, there were only heresies, which ran in vain against the great positive system of the world church and played only a minor role." (o.c., 9).
- 2) Thus, "positive" movements such as the Franciscan movement, the Crusades, the mystical movement, could find within the flexible system the medieval church an overarching power: "Even a movement like modernism (late XIXth/early XXth century) would not have rejected the medieval church as quickly and harshly as the modern church has done. (o.c., 9).

(C) Renaissance philosophy (1450/1640).

Some speak of "transitional philosophy" because the Italian Renaissance is only one aspect of the overall transitional period. According to *P. L. Landsberg, Die welt d. Mittelalters u. wir*, S. 76/77, "the external victory over medieval scholasticism achieved by humanism and Lutheranism was only a clearly visible becoming, a necessary consequence of the internal decay (i.e. of scholasticism)." We set these out in more detail.

The four major factors.

The four major influences that work the transition are

- 1) late medieval nominalism,
- 2) humanism,
- 3) the reform and
- 4) natural science.

(a) Late medieval Nominalism. (18/19)

As mentioned, William of Ockham is the great instigator as a conceptualist. A dual aspect develops from his epistemology.

(i) A social aspect:

- a) according to the realists, he says, the universal exists in many being simultaneously;
- **b**) the conceptualist claims that the same thing cannot exist simultaneously in many things; consequence: the universal is not a res (thing), but a simple sign that serves to designate many similar things, a moment; the real thing is always an individual being. Thus the Catholic Church is only a collective word to denote the private churches and their individual members with a word, which first of all, yes, only exists are faithful individuals and the individual churches. Not so the order concept of realist scholasticism, which assumed that the church was a high, in all private churches and individual individual believers, ideal power in reality; unity in the multitude which acted bodily in the one pope.
- (ii) Immediately a conception of nature emerged in conceptualist nominalism: the individuals, the private communities, once thought loose from the high unity (qui se ressemble, s 'assemble) (what is similar, comes together), of the realists, where a socially loose and, as it were, in a pre-social "nature" state, from which they could forge a freely chosen "social" bond. From the high understanding world back to nature. Behold the call of William. Willem saw the 'unnaturalness' of the realistic church, among other things, in (scholastic) science, philosophy and theology, which claimed to grasp the 'essence' (essentia) of things where it, in his opinion, only manipulated unfruitful hypotheses. Therefore, he argued, the Church should abandon all that unnatural stuff that was added later and return to the pure, holy faith of the apostolic times, the first Church; from a false knowledge of a theoretical nature to the practical truth of the Christian life, which, through that rational theology and philosophy of Augustine, Anselm, Thomas and other scholastics, has gone astray. The church has become too worldly because of that traditional evolution.

Older nominalism, conceptualist nominalism, modern or sens(ual)istic nominalism. This order (see above pages 13, 15) of

- 1) pure name nominalism
- 2) To conceptualism or conceptualism,
- 3) to sense or sensist diagram(ta) nominalism is indeed typical of modern mentality and philosophy. R. Van de zandt, The Metaphysical Foundations of American History, 's-Gravenhage, 1959, 125ff (Realism versus Nominalism) rightly says that nominalism was 'predominantly an English innovation': "Hobbes, Locke, Hume, Hamilton, and Mill express views about the nature of general ideas which parallel those of Ockham". (o.c., 126).

America, too, is nominalist: "When Jefferson (Thomas Jefferson (1743/1826), the third president of the USA, principal arranger of the Declaration of Independence, and influential political philosopher) chose Newton, Locke, and Bacon as the 'three greatest men the world had ever produced' (in his eyes), he chose three Englishmen; and each of them was a nominalist. (o.c., 126).

Van Zandt adds, "If it is true, which the philosophers usually accept, that nominalism is the predominant Weltanschauung of all modern life, it is equally true that Britain and America are the leading exponents of that Weltanschauung. Empiricism and its respective domains, materialism and positivism; the movements associated with secularism, modern science, Protestantism, individualism, the rise of industrial society and technology; the predominant emphasis on factualism (fact appreciation) and anti-intellectualism, -- all these currents are firmly rooted in nominalist philosophy and all find its outstanding expression in Anglo-American culture." (o.c., 126/127).

Like their English predecessors, the independents in the USA opted against the medieval realist conception of a differentiated unity and for the modern scientific conception of nominalist multiplicity or under differentiated "unity" (o.c., 128).

- (iii) A third, developed by Duns Scotus's voluntarism, feature of the attack on the concept of conceptual realism is noted by Landsberg, o.c., 78/79, namely, the completely self-governing God. God, in Scotus' view (which is highly nominalizing), cannot be bound to any realm of ideas: He is unquestionably omnipotent.
- (i) The realistic scholastic assumes that God is free but thoroughly good (in the sense of "acting morally") and thus wills the good in itself (cf. Parmenides' cath' heauto, secundum seipsum) because it is good in itself;
- (ii) another theory of values adheres to the nominalist: William of Ockham (and already Duns Scotus) believe that something only becomes "good" (valuable) because God wills it (He creates the good in Himself); therein lies a conception of omnipotence and authority that is very voluntaristic.

(b) Humanism (and the Renaissance). (20/22)

"In Italy stands the cradle of humanism. In the midst of the tremendous widening of the circle of vision and of traffic through geographical discoveries, and also, favored by the invention of printing, man appears not only in the universities and in the schools as something independent that wants to know itself and to live, facing the world that meets him. Gradually this movement seizes upon all the educated classes; merchants, princes, popes, as it incorporates the glorious house of the Medici, are among its most famous admirers." (K. Vorländer, Philosophie der renaissance. Beginning der Naturwissenschaft, (Philosophy of the renaissance. Beginning of natural science,), Rowohl, 1965, S. 14/15).

What renaissance is, is especially since, J. Burckhardt, Die Kultur der renaissance in Italien, (The culture of the renaissance in Italy,), 1860, argued. W. Jaeger, Humanisme et théologie, Paris, 1956, pp. 41ss., says that the Italian renaissance, to the Carolingian and the scholastic renaissance of ancient culture, adds

- (i) The revival of Greek throughout Europe,
- (ii) Plato and Neoplatonism (of which the Middle Ages knew directly less), the Stoa and Epicureanism, similarly, in the bellettristic field, Homer and Attic tragedy. He points out that the imitatio, imitation, of the ancients, as opposed to the scholastic, was more, indeed, one-sidedly poetic and not as thoroughly intellectually thoughtful as, say, with a Thomas Aquinas).

The studia humanitatis of the XVth century, as they were prevalent in universities, schools, and bookstores, includes the five parts:

1) grammar, 2) rhetoric, 3) poetics, 4) history, and 5) moral philosophy.

The Humanists:

- (a) were teachers of these subjects;
- (b) they were immediately drafters of letters and speeches and
- (c) played roles as secretary, administrator, diplomat of the Italian states.
- (d) They searched for ancient texts and published them.

In this multifaceted role they acted partly alongside, partly against the scholastics. They were essentially philologists, not natural scientists: the (written and spoken) word was central. Dialectics (logic) was not in their favor either. Literature (science) was their trade.

Hélène Védrine, Les philosophes de la Renaissance, Paris, 1971, pp. 15ss., characterizes humanism: "Undoubtedly in Florence, rich and (relatively) democratic city, the great themes of humanism are being worked out in a new framework of life:

- 1) the power of man,
- 2) the responsibility of the state citizen),
- 3) freedom of research.

Hence the criticism (classic since the "*Roman de la rose*") of the uselessness of monks and mendicant orders. Instead of defending poverty and unity, we have the glorification of work, of the family. A whole ethic brings the civil responsibilities, the commitment to this world,

profane culture and (...) the riches acquired by trade and industry to their value. Far is the time when Francis preached poverty. The old dream of the unity of temporal and spiritual power has collapsed. People have groaned too much under the popes and emperors to believe in their promises anymore." (o.c., 15). One name that more or less sums up what is happening is secularization. It is a feature of the Renaissance, of natural science, and even of reform, such as, incidentally, already of nominalism (to individual being and the "nature" in which they are situated, for each world of ideas). "De aarde nam de mensch" (The earth took man), said *Dirk Coster* (*De Nederlandse poëzie in honderd verzen, XXVIII*): (Dutch poetry in a hundred verses), earth-orientation is a good translation of secularism.

By itself, "secularization" means worldification, where "world" means

1) this earth and especially 2) the lay state (laicization) as opposed to 1) 'the other world' and 2) 'the spiritual state'. In the transfer of power, property or so from the spiritual state to the lay state there is always a minimum of earthliness or secularism.

'Humanism'

- a) 'Humanism' is therefore to be defined, in its first instance, as the cultural movement which, coming from Italy, occurred in the Renaissance period, from the XIVth to the XVIIth centuries, in the learned and scientific world of Europe, especially in Western Europe, and to a lesser extent, also in Central Europe." (M. Nauwelaerts, The University of Louvain and Humanism, in our Alma Mater (vol. 34 (1980): 2 (pp. 104/109). Around 1460 this humanist movement penetrated the southern Netherlands (1425: foundation of the University of Leuven). "Ad fontes", "To the sources", i.e. to the language, the art, the view of classical antiquity, beyond the Middle Ages and Gothic. Such is the slogan of the humanists stricto sensu.
- **b)** Yet the mentality was a secularizing one. This then is 'humanism' in its second instance, namely, the cultural designation that was at work behind, in and through that interest in antiquity. It is not surprising, then, that *H. Arvon, La philosophie du travail*, (The philosophy of work,), 1961, pp. 9ss., says that 'active behavior' in its generative function, beyond any religious intent, makes it, in the Renaissance, to the contemplative attitude and that the human will is central to its work ethic.

Sociologically speaking, the citizen is the ideal bearer of this spirit: in the burg (if necessary surrounded by a rampart or wall) (i.e. fortified and secured residence in times of need especially, if necessary with a trading post, where the merchants piled up their wares) the 'citizen' stands out (i) against the vagrant (the pilgrim, the minstrel, the pedlar, the sailor, the wandering knight, the adventurer) and (ii) against the lord (who surrounds himself with serfs or serfs), - types to which the citizen, in his urge to be independent, does not want to belong.

Similarly sociological, the Renaissance is the onset of the "intelligentsia.

- **a)** 'intelligentsia' is a term that emerged in Russia in the mid XIXth century: the 'intellectuals' who were alienated both from the Orthodox Church and the Tsarist state and wanted to reform, if necessary by revolution. Many were 'populist': they idealized 'the people' (and the peasants).
- **b)** Since then, the notion of 'intelligentsia' has been broadened to mean 'the creative vanguard' i.e. artists often scientists or strong individuals who create what Th. Geiger calls 'representative', i.e. not anonymous or -nameless cultural products, creating new situations or reacting to old situations in new ways (creativity, resourcefulness), e.g. a new art style, a new philosophy, a new division of labor, etc.

Intellectuals, who perform mental work, by virtue of university or at least higher education, do not necessarily belong to the intelligentsia: only the creatives belong to it.

Well *Th. Geiger, The creative vanguard (On the social functions of the intelligentsia*), Rotterdam/ Antwerp, 1970 (Dt.: 1949), pp. 21, 58, says

- a) that primitive cultures also exhibit 'representative' culture, i.e. creative culture, yet mainly religious in nature and the healers, magicians, priests etc. are the bearers of it.
- b) So also did the clergy in the Middle Ages: they kept the profane part strictly to themselves, according to Geiger, but diligently made working-class people share in their religious part. Calling them the "intelligentsia" of their time or society does not work because Geiger reserves that name for the profane, the lay culture. "A profane representative culture makes its appearance in European cultural history with the Rinascimento (by which the proposer means the older Southern European period of the Renaissance)" (o.c. 59). "The secular culture of the rinascimento found its center of gravity in musical values. Not scientific research, but visual art and bellettry determined the cultural face of this period". (o.c., 60). Hence, the elite of the time was very much a people's favourite.

Dating. Those who have a view of the humanist movement (and the Rinascimento) begin with Petrarch (1304/1374), the father of humanism and the first modern poet (for whom Dante (1265/1321) was in many ways a precursor). One can, in that spirit, put forward 1450 as the starting date.

Others, instead of starting from the rich cities of Italy take the fall of Constantinople (1453) as the beginning. Still others 1493, the discovery of America. The fall of Constantinople is particularly noteworthy: it reinforces the Byzantine influence that already, around 1438 (attempt at reconciliation between Rome and Constantinople), began and brought Platonic and Aristotelian intellectuals to Italy, prompting philology, as the humanists would practice it.

(c) *Lutheranism.* (23/25)

Martin Luther (1483/1546), in his personal religiously eventful life, to which his theological development closely related, constitutes, it is generally believed, the core of the reform. Among many other themes, the theme of the Ochhamist conception of God can nevertheless be put forward as the main one: William of Ockham fled from Avignon, France, in 1328 to the court of Louis of Bavaria in Munich, where he died in 1350. He had great influence in England and France but especially in southern Germany. All of the education there was steeped in Ockhamism.

"Luther faced at Erfurt a God of arbitrariness, of unreasonable strictness and impossible demands. (...). Luther's sensitive soul, which tended toward melancholy and despondency, could not stand the Ockhamist ideas of God and the religious practice based on them. According to Ockhamism, the moral law was not based on the nature of things but on an arbitrary institution of God. The doings of the faithful possessed no intrinsic value. Their merit, their acceptance or rejection by God, depended on an arbitrary decision of God. (...). Ockhamism had a distinctly Pelagian slant: man was dependent on his own natural powers.

The Augustinian and typically Catholic conception of grace (...) did not know ockhamism. Grace, like justification, was understood as a cloak with which God covered the sinner who believed. (...). In addition, the act of faith itself carried an arbitrary character. The goodness of the act of faith could in no way be reasonably founded. (...). Believing was a blind assumption on authority without reasonable insight. Ockhamism was fundamentally anti-intellectualist". (W. Van de Pol, Het wereldprotestantisme, (World Protestantism), Roermond/ Maas oak, 1956, pp. 35/36). In short, much of that Ockhamism passed into Luther's teaching, "albeit also in a new evangelical context" (o.c, 36); Luther thought his Ockhamism was Catholic (where it is generally considered to be a decline visà-vis highscholasticism) and thus fought a caricature of Catholicism.

At Wittenberg, when he was a full crisis, Luther found much support from his confessor von Staupitz, a convinced Thomist and supporter of modern devotion: "I have everything from von Staupitz. Von Staupitz started the doctrine, for he said, 'One must look to the man called Christ'" (o.c., 39). Thus Luther's words themselves. Together with his personal Bible study, this led to his rediscovery of the gospel: "Deliver me, Lord, in your righteousness" (psalm) and "In the gospel God's righteousness is revealed, obtained by an ever-growing faith"; (*Rom. 1:17*), as well as "Now, apart from the law, God's righteousness has appeared, of which the law and the prophets - i.e., the Old Testament have borne witness.

It is God's righteousness through faith in Jesus Christ and for all who believe." (*Rom 3: 21/22*). The concept of righteousness had far-reaching meaning for Luther:

- (i) until then he had understood this word in the Ockhamist sense of strict demands being made by God on one who (Pelagian) ought to maintain the natural law and the revealed law by his own efforts;
- (ii) Biblically (and fundamentally radically Catholic, which Luther did not see), "righteousness" means the fact that God reveals himself in his word that ought to be believed, and does so in a spirit of mercy: Jesus incarnates that righteousness and communicates it to the sinner who will confess and believe his sinfulness. "Justification, i.e., coming to order with God, through faith alone," such is Luther's rediscovered gospel. (Van de Pol, o.c., 44/47).

Thus one understands *K. Leese, Recht und Grenze der natürlichen religion*, (Right and limit of natural religion,), Zurich, 1954, S. 30/31, where he says: "(Natural theology) is - with Luther and Calvin under the sign of the Fall and original sin.

- (a) Its dark and faded knowledge has no immediate and direct, but, at its most favorable, only a referential relation to salvation in Christ.
- **b**) Only for the justified, the Christian, do the rays of the truths of natural knowledge of God shine in a new light. The 'natural' man is not capable of making any beneficial use of the truths of natural knowledge of God and manners. He quickly turned them into idols and idolatries, a religion of work righteousness and self-redemption.

Also, "Against the unbroken optimism of the stoa, the enlightenment, and Catholicism, the Reformation attitude toward natural religion is thoroughly pessimistic."

J. Maritain, Trois réformateurs (Luther, Descartes, Rousseau) Paris, 1925, cites a piece of Lutheran invective prose:

"Reason (Vernunft) is the devil's biggest bitch. By her nature and manner of being, reason is a harmful bitch. She is a whore, the devil's bitch par excellence, a bitch that perishes from the scab and leprosy. One should trample and destroy her, her and her wisdom (...). Cast her filth in the face to make them ugly. She should be drowned in baptism. She, the reprobate, would deserve to have people thrown into the dirtiest place in the house, in the toilet". Thus Luther, in his last sermon, at Wittenberg, at the end of his life.

Of Aristotle, Luther says: Aristotle is the godless fortress of the papists. He is to theology what darkness is to light. His ethics is the greatest enemy of grace". Or still, "He is a snare to be put in the swine pen or in the donkey pen." (o.c., 43/47; 43). Of Thomas Aquinas he says: "He never understood a chapter of the Gospel or Aristotle." (o.c., 43).

The contribution of reform.

Hélène Védrine, Les phil. d. l. Ren., pp. 61/62, says that the Reform "thoroughly transformed the thinking of the Renaissance and especially its philosophy" (o.c., 61). The Renaissance was "man-centered" (anthropocentric): by its one-sided emphasis on (hereditary) sin necessitating grace and redemption, the Reform made clear that modern man belongs to two - not one, - as the Renaissance claimed,

- (i) the pious, Bible-reading order that arranges the individual soul life with God (*Gott und die Seele Christentum*), and
- (ii) the earthly order, in which each individual fulfills God's calling through the sanctification of labor.

Here Védrine situates *Max Weber, Die protestantische Ethik und der Geist des Kapitalismus*, (The Protestant Ethic and the Spirit of Capitalism,), 1904. As late as 1571, the Catholic Church refused to morally approve the loan against interest. Luther, too, still remained very medieval on the subject of finance. But Calvin (1509 /1564) and his successors were economically modern: they condemned idleness and unemployment, favored labor and investment; without condoning usury, they exhorted the banker and the industrialist who make profits. Thus, Calvinism and Puritanism, especially in the USA (where Weber resided and experienced a society marked by Calvinist ethics), favored industrial capitalism. Weber discovered the connection between Puritanism and economic rationalization. Indeed, Puritanism is very anti-magical: ritual is superstition. Thus it 'deconsecrates', desecrates (desacralizes) the world, somewhat in the line of the Hebrew prophets, in order to advocate, in the place of that deconsecrated world, a rational world-formation, not in materialistic spirit but 'to the greater glory of God'.

(d) Natural science.

In addition to the religious crises, the crises of knowing. While the reform shakes part of Europe, the study of nature and the cosmos develops, thus preparing what is called (rather summarily) the epistemological cut of Galilean science." (H. Védrine, o.c., 63).

The term 'epistemological cut' dates from *M. Foucault, Les mots et les choses, (une archéologie des sciences humaines*), (Words and things, (an archaeology of the humanities),), Paris, 1966, which dissects the changes in knowing, from the Renaissance to the present day. The "epistemological space" (i.e. mental thinking) of the Renaissance aims to discover similarities ("ressemblances") thanks to "signs" contained in things themselves: thus

- 1) the world appears as a scripture (text) which should be deciphered either by learning (think of the study of texts by humanists or Protestants) or by divination. Knowing is the art of discovering correspondences between the macrocosm and the microcosm, between the creator, the creation and the creatures.
- **2)** Language too is a 'writing' to be deciphered. So that from things to words and vice versa a free path exists.

Further explanation.

H. Védrine, o.c., 67ss, says that all "knowing" at that time ends in (uncritical) generalizations, whether or not intertwined with mythic-occult ideas. After all, natural philosophy and what we now call natural science are still intertwined. Thus one constructs one coherent and comprehensive worldview.

Védrine cites *Agippa of Netesheim* (1486/1535): "Since there are three kinds of 'worlds', viz. the elemental (i.e. those which are the elements, the fiscal world), the astral (i.e. those which are the stars, the 'celestial' world) and the intellectual (i.e. that of the spirits); since that which is subordinate is governed by and undergoes influences from that which is above it, so that the Archetypus (the primordial) himself and the supreme Creator-Maker communicates to us of the 'powers' of his omnipotence through the angels, the heavens, the stars, the elements, the animals, the plants, the metals, the stones.

He made and created every thing for our use, - for that reason it is not without proof that the magicians believe that we can naturally penetrate, along the same steps, (...) to the archetypal world itself". (*De occulta philosophia* (written in 1510, published in Antwerp in 1531, - a syncretistic work that synthesizes both Christian and Neo-Platonic wisdom on a Kabbalistic basis and claims that magic is the most perfect science). Magic surpasses and vision and mathematics and theology, all three of which are united in it and which reflects the true nature of the universe: "Toute une époque y a cru", says Védrine, o.c., 70.

That 'science' is involved even with magic is shown by *Pietro Pomponezzi* (1461/1515), leading Renaissance Aristotelian, in his *De incantationibus* (published in 1556) - 'incantatio' means 'magic formula' (which, originally, was sung).

In it he claims that the miracles of the saints should not be attributed to God but to the natural powers of imagination. For example, the miracle of Aquila, a town in the south of Italy: it had been raining continuously for a long time; the inhabitants called on Saint Celestine to dispel the clouds and bring clean weather; the saint appeared to the crowd: "There is no need to resort to angels and devils (...). See: the Aquileians, fearful and credulous, prayed to S. Celestinus and to God for the expulsion of the rain (...). Not only did the image of S. Celestinus take root in their imagination, but in the sky itself.

Consequence: the image was seen by so many people. So it goes with all apparitions: if one assumes that they can occur in dream form, then it is necessary to believe that they can also occur in the atmosphere. (Cited from Védrine, o.c., 70/71).

Also *Montaigne*, *Essais* 1:21, says, "Antiquity has claimed of some women in Skythia that, once made up and enraged against someone, they killed him by a single glance." After all, fantasy is power transmission to something or someone.

The fantasy is, in the XVIth century, 'ruler,' says Védrine, o.c, 71. No one disputes the 'magnetizing power' of fantasy. *Giordano Bruno* (1548/1600), the founder of the first consistent pantheism of the modern period, in his *De imaginum compositione*, 2:3 even has an explanation:

Bruno sees in it a kind of pneuma, spiritus, breath, to be situated between the (gross) substance and the (spiritual) soul, which informs the body; this "spirit" or breath can move delicately (subtly) through the air as e.g. a voice does. The magician, familiar with the secrets of nature, makes use of the imagination: "the imagination is indeed the sense par excellence. Reason: the imagining mind itself is the 'synthetic' organ in the first body of the soul. This sense is hidden at work in the interior of the soul: it contains the higher part of the living being and is practically its summit, for it is around this sense that nature has built the whole order of the individual." (Védrine, o.c., 72). "The imagination encloses in itself extraordinary possibilities, which are only waiting to be actualized". (ibidem).

Well, it is in such a context that *M. Foucault, Les Mots et les choses*, pp. 31/59, sees at work his conception of the "episteme" (the largely unconscious frame of mind) of the Renaissance.

- 1) Convenientia, agreement of alliance, e.g., *G. Porta, Magia naturalis* describes: "As to its growth, the plant corresponds to the animal, by feeling, the beast to a man who, in turn, adapts himself to the rest of the stars by his reason. This connection proceeds in such a proper sense that it resembles a taut cord reaching from the first cause to the low and unsightly things, which, by means of a reciprocal and uninterrupted connection, such that, the higher power that pours out its rays, will come such that, if one touches one extreme of it, it will vibrate and make the rest move." (M. Foucault, o.c., 34).
- 2) Aemulatio, remotely operative convenientia or promissory agreement, can be described as follows: "the stars are the matrix (cradle) of all herbs and each star of the sky is only the spiritual representation of a herb as it represents them. And, as each herb or customer is an earthly star looking up to the heavens, so also each star is a heavenly plant in spiritual form, differing from the earth only by matter. (...). The celestial plants and herbs are turned towards the earth and look directly at the herbs they have produced, sending to them some special 'power'." Thus *Crollius, Tractatus de signaturis* (Fr. translation, Lyon, 1624), cited M. Foucault, o.c., 35.
- 3) The analogy, similarity, is the interlocking of convenientia and aemulatio: the example par excellence is man, who is proportional to the heavens, the earth, to the stones, plants, animals, and so on.
- 4) The fourth major similarity is sympathy (and antipathy). "The element fire is warm and dry; it therefore possesses antipathy with the properties of water which is cold and moist.

The warm air is moist, the cool earth is dry, that is antipathy". (o.c., 40). We know this from ancient times (Stoa, theosophies).

How does one recognize these obviously hidden similarities (conv. aemulatio, analogia, sympathia/ antipathia)? By the 'signatura', the (hand) drawing, which shows that there is a resemblance. The sign, signatura, is e.g. of the convenientia, the fact that, in strong and courageous animals, the extremities of the limbs are broad and well developed (as if their strength had accumulated in their extremities); the aemulatio, e.g., is known by the analogy: the eyes are stars because they spread the light over the face as the stars do in the darkness; the monkshood, a plant, is sympathetic towards the eyes; this plant betrays, by a signature (= a word that speaks about it), its seed grains are dark balls, encased in white sheets (like eyes and the eyelids), that it possesses 'sympathy' towards the eyes.

In other words, the signatura is also a resemblance.

- a) To seek meaning (hermeneutics), says Foucault, o.c.44, is to uncover similarity;
- **(b)** to seek the lawfulness of (ken) signs (semiotics) is to discover things that are similar.

Behold the natural science, resp. philosophy of the Renaissance, according to the famous structuralist that is Foucault. To know nature is to know its similarities.

But language is also conceived in this way:

- (a) she is a mark (series) in the things themselves;
- (b) under it is the text (that which is said) and
- (c) above that is situated the commentary, which explains and understands the text, starting from the language marks or marks, marks of it. (57/59).

It should be noted that M. Foucault does describe (structurally) the combinatorial operations proper to Renaissance natural philosophy, yet is without existential contact with a magical-mystical and with physical life reality.

Védrine, o.c. 63, writes that the study of nature in the cosmos of the time prepared the "epistemological cut" of Galileo "s type of science. We now explain this in more detail. *J. Bernal, The dimensions of the scientific Revolution*, in *B. Tierny, D. Kagan, L. Pearce Williams, Great Issues in western Civilization*, New York, Toronto, 1967, vol. II, (*From the scientific Revolution through the Cold war*), pp. 4/17, says:

"The period roughly taken from 1540 to 1650 has no appropriate name in history. It has been called the Counter-Renaissance (contra-renaissance), but this would imply a much greater degree of reaction to the earlier phase (of the Renaissance) than in fact occurred. It includes (i) the counter-reformation with its baroque style, which was its visible expression, (ii) the religious wars, which raged successively in France (1560/1598), the Low Countries (1572/1609) and Germany (1618/1648), and

(iii) the foundation of the States General of Holland (1576) and the Commonwealth of England (1649).

Of these events, item (iii) was of utmost importance: it shows the political triumph of the new bourgeoisie in the two countries where the bulk of world trade and manufacturing was concentrated.

In terms of science, this period includes the first major triumphs of the new observational, trial-and-error method. It begins with the first exposition of the solar system by Copernicus and ends with its solidification, - despite its condemnation by the Church - by the work of Galileo. She contains within herself Gilbert's description of the earth as a magnet (1600) and Harvey's discovery (1628) of the circulatory system. She bears witness to the first use of the extenders par excellence of visible nature, the telescope in the microscope." (o.c., 4).

"The Jesuits, leading the counter-reforms, wisely realized that they might win more souls by favoring science than by blindly opposing it. Thus they kept up with the scientific movement, especially the new astronomy, and were even its active disseminators and establishers of observatories in India, China and Japan.

At the same time, like watchdogs, they watch over it within science, to guard it from some harmful effect on the true religion and thus, without wanting to, beneficiaries are the scientists in the Protestant countries who were beyond their reach.

The new experimental philosophers (or scientists, as we would now call them) (...) were no longer part of the intense urban life of the Renaissance: rather, they emerged as individual members of the new bourgeoisie, in high degree lawyers, like Vieta, Fermat, Bacon, physicians like Copernicus, Gilbert, Harvey, less in number, petty nobles, like Tycho Brahe, Descartes, von Guericke and van Helmont; people of the church, like Mersenne and Gassendi; and even one or two brilliant achievers of the lower orders, like Kepler." (o.c., 5).

Kepler (1571/1660) had figured out that the movements of the planets (especially then Mars) were elliptical, as Arzachel (1029/1087) of Toledo had suggested. But Galilei (1564/1641) did it exactly. This is twofold.

- (i) He was professor of physics and military genius at Padua: he made himself a telescope. He saw the moon (with its seas and mountains), Venus (with its phases), Saturn (with its discs), Jupiter (and three of its moons).
- (ii) He recorded these facts in the mathematical description of bodies in free motion. "By connecting exact experiment and mathematical analysis, Galilei solved the comparatively simple problem of the fall of bodies, by showing that, in the absence of air, they follow a parabolic path. Thus he gave the first clear example of the methods of modern physics". (o.c., 8).

As *K. Vorländer, Phil. der renaiss*, Hamburg, 1965, S 120, says, Galilei knew perfectly well the Aristotelian tradition, which, in Milesian spirit, gives priority to perception (empeiria) over rational reasoning, yet, at the same time, he adhered decidedly to the Platonic tradition, which, in Parmenidean-Pythagorean spirit, - one thinks of *Platon's Menon* - sees a problem solved only when, in a reasoning way, perception is connected with its grounds of reason.

For the latter, the platonic analysis, analysis, was the model:

- (a) the lemmatical part pretends that the unknown which one seeks is already known (one pretends to know it already, in the form of an assumption; prolepsis, anticipatio, preemption, would be a better name (says *O. Willmann, Einflusz des Idealismus, III (Der Idealismus der Neuzeit*), (Influence of Idealism, III (Idealism in the Modern Era)), Braunschweig, 1907-2, s. 45/69)
- **(b)** the analytic part examines the lemma postulated as a working hypothesis, on its terms: for it is interwoven in a set of relations (set and system), which one picks out 'analytico' 'analytico modo, in an analytic way). The full name would thus be: 'lemmatic analytic method'.
- (i) Platon applied it to some idea, which was studied in its connection with other ideas:
- (ii) Renaissance scholars ("experimental philosophers") apply them to algebraic terms and, through these algebraic terms, to empirical data.

Vieta (François Viète (1540/1603) introduces, indeed, in addition to the existing medieval number arithmetic (logistica numerosa), the letter arithmetic (logistica speciosa, i.e. which works with species, ideas), which represents thought contents "per alphabetica elementa" (by means of letters of the alphabet) visibly.

In other words: the abstract letters of the alphabet represent the general concept (mental content): thus 'a + b' indicates the general concept (species) 'sum' (of two quantities). Thus on the paper there is a small forma (the Aristotelian word for species, thought content) or 'formula', formula. Or in small mode (mode of being), i.e. modulus, model. (Thus *Vieta* in his '*In artem analyticam isagoge*, introduction to the analytic art (i.e. professional science, 1951)). Thus Vieta achieves a differential:

term (species):	formula speciosa: a + b	formula numerosa $3 + 4 = 7$
Universal non-operational (mathematical)	universal operational	Private operational

This was

- 1) on finding unknowns in equations, (6 = 12.z e.g.),
- 2) on functions (function theory: the variable quantities are introduced e.g. y = 2x),
- 3) applied to geometric figures (analytic geometry, e.g. $r^2 = x^2 + y^2$ for all possible circles) (Fermat, Descartes et al.)

Internalist view of Galilei 's theorem.

Actually, for those who know philosophy history, Galileo is the continuation of the Aristotelianizing Neo-Platonists:

a/ already Plotinus (+203/+269) and his immediate pupil Porphyry (+233/+205) were strongly Aristotelian influenced;

b/ But Themistios (.../+390), founder of the Constantinopolitan school, and the whole Alexandrian school (Hupatia, Sounesios, Hierocles, Ammonios Hermiou, John Philoponos, Stefanos) continued this Aristotelianizing: Tolerant- pluralistic, averse to occultism, speculative-minded, mathematically and scientifically oriented, they practiced a kind of theological idealism of a Pythagorean-Platonic nature: they saw viz.

a/ in nature the eternal ideas, number forms and,

b/ in the ideas, resp. number forms, the eternal plan of the Creator.

Now listen to Galilei: the book of nature can only be read by those who know its letters, he says; "it is written in a mathematical language and its characters are triangles, circles and other geometrical figures". More to the point, mathematics is "a meeting point where human reason meets divine reason" (Dialogue on the Larger World Systems (1632)). So much for the general direction.

a/ The 'homo faber'

The "homo faber"-the craftsman, the engineer-played a role. Something A. Koyré, Gallileo and Plato, in Journal of the history of Ideas, Jrg. IV (1943), 400ff, somewhat understates.

J. Rosmorduc, De thalès à Einstein (Histoire de la physique et de la chimie), (From Thales to Einstein (History of physics and chemistry)), Paris, 1979, pp. 30ss. says that, indeed, not the artisans and engineers accomplished scientific turnarounds of the XVIth and XVIIth centuries and that neither Copernicus nor Galilei were members of a guild.

However, Galileo in Venice was interested in the works in the State's arsenal and, once a professor in Padua, he set up a workshop where, according to B. Kouznetzov, metal casters, turners and carpenters worked: "Consequently, the craftsman, the maker of scientific material, worked for the researcher and under his direction. Which does not prevent, in the other hand, the utilizer himself from having a hand in the fabrication." (o.c., 31). In other words, technology is entering science.

- A. Comte, the father of philosophical positivism (1798/1857), notes that scientific experimentation is in its deepest essence an 'artifice': "one observes bodies, outside their natural conditions, in artificial circumstances, deliberately introduced to facilitate the investigation of the course of phenomena. (Védrine, o.c., 54).
- G. Bachelard, Le nouvel esprit scientifique, (The new scientific spirit,), Paris, 1934-1, 1975-13, pp. 16/17, says: "The phenomenon must be shifted, filtered, purified into the cast of the instruments, made at the level of the instruments. Well, the instruments are only materialized theories. Out of instruments emerge, phenomena which entirely exhibit the characteristic of theory. What makes Bachelard speak of phenomenotechnology.

b. The measurement, i.e., the accuracy, expressed mathematically.

This is a second aspect. "Du monde de l' à peu près à l' univers de la précision" (From the world of approximation to the world of precision), is the title of an article by Al. Koyré. One attributes to Socrates the following sentence: "The faculty of weighing, measuring, and counting allows man to free himself from sensory appearances."

a/ The primitives, antiquarians and medievalists weighed, measured and counted for economic reasons:

b/ Galileo, however, did it, instead of out of habit, systematically: he invents a method and tries to apply it. Here too he is an innovator. Whether, however, *W. Fuchs, Thinking with Computers*, The Hague, s.d., pp. 170/171, is right, when he claims that Galileo, out of 'a positivist resignation', (i.e. because, out of positivist considerations, he gave up, eliminated the 'why' and 'what is' questions in order to measure, weigh and count only, that is something else. Galilei 's zeitgeist, his ambitions were different. It is true, however, that he geometrized space, as *A. Koyré* says (*The origins of the Scientific revolution*, in *B. Tierney et al*, *Great issues in western Civilisation*, II, pp. 49/50) and that in *Il saggiatore*, he says that "the great book of the universe is written in mathematical language" ... and that therefore measurement, weighing, counting are decisive intermediate terms between **a**/ everyday nature and **b**/ scientifically approached nature. One thinks of the sequence: 'understanding'/ 'mathematical formula'/ 'numerical material'/ 'nature', and one understands the new scheme that Galilei deliberately introduces.

c. The new conception of matter.

Matter consists, for Galilei, of two aspects:

1/ taste, smell, color, - all these are with respect to the object in which they occur, nothing more than a name, since they exist only in the perceiving body;

2/ In contrast, size, shape, how-big-and-moving he calls "primary properties": to these properties (reflecting extensiveness, situationality, and density) he reduces his "new science. This implies a mechanism that disparages the qualitative approach to matter, at least scientifically.

d. Mechanics.

The movement of bodies was Galileo's great concern throughout his scientific life.

a/ Da Vinci had already sought a mathematical approach to mechanics or motion theory.

b/ Galileo, with better experiments and more appropriate mathematics, became, with Simon Stevin, the founder of what he called "two new sciences," namely, statics, the study of bodies (and forces) in equilibrium, and dynamics, the study of bodies in disequilibrium.

P. Wolff, La grande aventure de la physique, Paris, 1968 (// Eng. Breakthroughs in Physics), pp. 39/61, gives a sample of it in French translation: Salviati (Galilei himself), Sagredo (an understanding interlocutor), and Simplicio (a late-night Aristotelian) are talking about the uniformly accelerated motion. Indeed, in 1604 Galilei is in possession of the first law of the mathematical or mathematical physical.

This law, according to *G. Canguilhem, Etudes d' histoire et de philosophie des sciences*, (Studies in the history and philosophy of science), Paris, 1968-1, 1975³, p. 41, links the duration of the fall of a body (without air resistance) to continuous space.

a/ According to P. Duhem (1861/1916), who rightly restored medieval science to glory, Galilei depends on the inpetus theory of the XIVth century.

b/ "We belong (...) to underline the radical novelty, the revolutionary of the concept that Galilei introduces in the physical: the movement is a property of things that is preserved indefinitely.

Consequence: it is unnecessary to seek causes for the movement; it is only of the modifications of the movement that one should seek causes (...). Thus discovered and described by Galileo the first scientifically expressed invariant".

For us, Galileo's law is the basis of dynamics (the theory of forces, part of mechanics). Galileo is truly an innovator:

a/ except for this theoretical first law (invariant, immutable through changes)

b/ is also the magnifying glass, the perspicillum, telescopic and microscopic (as theoretical) tool used, the first tool of scientific knowledge (o.c., 42)... thanks to the same Galilei.

With that, the so-called scientific revolution had begun. Mathesis and instrumentation work together on this. The perfection of both will constitute progress of science, mathematical physical, after Galileo.

Externalist view of Galileo's position.

(1) Until now, we viewed what Galileo did, as epistemologists, as knowledge and science experts, from the inside:

a/ we saw the continuity (Platon's analusis based on a lemma);

b/ however, we also saw the break (extension of the analusis to what the new instruments on earthly bodies and celestial bodies showed in motion, thanks to letter calculus).

- (2) Do we now look at his achievement from the outside, "as a cultural phenomenon" (G. Canguilgem, o.c., 15), i.e. as having some outward connection with other than scientific pursuits.
- **a.** "Before the effects of the (scientific) revolution in thinking could be felt in praxis, it was necessary that the possibilities offered by the new science penetrated not only to the scholars but also to the new class of enterprising people who were in the process of making their own political revolution merchants, seafarers, manufacturers, statesmen and the early and progressive capitalists. Galileo had begun it, yet he lived in a country that had already lost its élan and was rapidly being frozen into reactionary attitudes by the Counter-Reformation." (*J.D. Bernal, Science in Histoty*, in *B. Tierney et al., Great Issues in western Civilisation*, II, p. 9). The rationalist enlightenment will carry this through (see Locke et al. further).

b. The geometrization of nature and of natural science led to the crisis of the antique medieval conception of the cosmos, as it had been elaborated by the (late) medieval scholastics.

1/ A multiplicity of truly diverse being (ontological pluralism),

2/ a ranking of the being (ontological hierarchy, by which the plant reaches out above the stone and the animal above the plant),

3/ a central thesis of man (medieval 'humanism' or 'personalism': man as a person reaches out above the rest),

4/ a deity who makes everything possible (theocentrism), all this embedded in a concept of order, which encompasses all the senses in its supple unity (analogy): such is what is to be understood by cosmos conceptions.

Especially the qualitative natural science elaborated by Aristotle, which on the basis of daily experience (and not of experiment, i.e. a/ of theorizing in a mathematical sense and b/ of testing the mathematical formulas against the facts exposed by the instruments) gave things, according to their own nature, a fixed place in a harmonious creation.

In its place now comes mechanical thought in the endless losing and by everywhere the same laws governed material world (mechanism), in which the mathematical physicist, as the decisive subject (subjectivism), becomes the ruling class and displaces the old intelligentsia, namely the ecclesiastical thinkers.

c. The heliocentric and the church.

Copernicus (1473/1543) et al. had paved Galilei a certain way. Christendom, notes Canguilhem, o.c., 44, was not at first in the state of alarm by the treatise of the Polish Canon:

1/ The Council of Trent (1545/1563) is plainly silent on the heliocentric;

2/ Many ecclesiastical friends of Copernicus and many Jesuit astronomers accept it as a mathematical hypothesis supported by the optical relativity of motion.

"If anyone cries scandal and speaks of sacrilege, even before the publication of *De revolutionibus* (*Copernicus*' work), it is Luther: 'This fool, says Luther of Copernicus, wants to turn the whole of astronomical professional science upside down." (o.c., 44).

In 1616 (brought before the Holy Inquisition by the Jesuit Lorini) Galilei receives a warning: the doctrine must not be taught. In 1633, again brought before the Holy Inquisition, he is sentenced to life imprisonment. Between 1531 (year of the publication of *De revolutionibus orbium Coelestum*, dedicated by *Copernicus* to Pope Paul III, which did not prevent it from being printed was 1543, year of Copernicus' death) and 1616 are 75 years. Nevertheless, a/ the second condemnation did not oblige most of the princes of Europe (including the King of France) to forbid the spread of the heliocentric) and b/ many ecclesiastical personalities remained convinced of its correctness without harm. All this does not prevent Galileo 's condemnation from being, even to this day, more than a fait divers in church history. It was not until 1822 that the Church allowed the teaching of heliocentrism.

This proves that it took years for the Church to process the Galileo case. And, on 10.11.1979, Pope John Paul II, before the Pontifical Academy of Sciences, expressed the desire to deepen the Galileo case. On 22.10. 1980, Msgr. Poupard, vice-president of the papal secretariat for the infidels, announced that the pope's wish will become reality. Thus, Father D. Dubarle 's wish, expressed to Pope John XXIII, to rehabilitate Galileo may become reality (Dubarle, O.P., is a nuclear physicist).

Note - By "inquisition" one means:

- (1) the monastic-papal inquisition, which mobilizes monastics as heretic judges (from 1233 (France) and 1238 (Spain) by Gregory IX; before that date, only episcopal and legatal inquisitions of a local nature existed, started especially from 1139);
- (2) the Roman Inquisition, since 1542 (Paul III), with proxies for all Christendom and of a tolerant nature: before it appeared G. Bruno and G. Galilei;
- (3) The Spanish Inquisition, started in 1478 by Ferdinand and Isabella (approved by Sixtus V and Paul IV, directed against Moors, Jews and, later against Protestants and other suspects (witches).

The Inquisition in all its forms covered the entire Latin Christendom, except England. The major trigger was the flowering of inner-church heresies from +/- 1000 onwards.

H. officie is the second name for Roman inquisition.

a/ One will remember how in 1962 some works of P. Teilhard de Chardin were given a warning by the Holy Office and how the psychiatrist Dr. A. Terruwe was condemned in her theories in 1956, yet this Catholic psychiatrist, together with Prof. Duynstee, with whom she worked, was reinstated in 1965 by the same Holy Office.

b/ One may also know that Cardinal Frings, Archbishop of Cologne, during the second session of the Second Vatican Council, spoke about the scandal of the Holy Office, mainly in his method used (without interrogation e.g.).

Indeed,

- (1) the ancient-pantheistic church and the high or early-medieval church did not have an inquisition against heretics;
 - (2) the "human rights (understand: individual) movement, also underway,
- **a**/ politics, in the revolt of the Netherlands against Spain (1568/1648) and in the English (1668), American (1776) and French (1789) revolutions;

b/ intellectually, in **1**/ the historical political philosophy of Renaissance humanism (Lipsius (1547/1606), Grotius 1583)) and **2**/ the school of Salamanca (= Spanish scholasticism; cf. p.16 above), this "Human Rights" movement tolerates an authoritarian system of oppression less and less. This has also penetrated into the Church, after a great deal of wrangling. The so-called 'scheme' of religious freedom, presented to the Second Vatican Council in the report of Msgr. De Smet, and not without the influence of the American Jesuit, J. Courtney Murray, bears witness to this change of attitude.

Note.-- To understand inquisitorial behavior (especially in papal and Roman form), perhaps, *M. Foucault, Histoite de la folie à l'âge classique*, (History of madness in the classical age), Paris, 1972, pp. 181/188 useful: there it deals with madness as

i/ unwise ('déraison'),

ii/ deviation from the group (those emissions),

iii/ ascertainable fact ('He there is a madman'),

iv/ type of abnormality in the scientific sense (essence of insanity).

Well this scheme is applicable to all "others", i.e. beings who are "different" from the ruling group, "dissident" beings (one could now say with the new philosophers, cfr. *G. Schiwy, Les nouveaux Philosophes*, Paris, 1979 (Dt: 1978), p. 60; 29/41 (M. Foucault)), such as the witches, who were persecuted especially in the Renaissance period (from 1320 the inquisitorial persecution began: in 1319, Pope John XXII, as the first, allowed the torture of a woman accused of fate and heresy (cfr. *P. Villette, La sorcellerie et sa répression dans le Nord de la France*, (Witchcraft and its repression in the North of France,), Paris, 1976), further the Gypsies (*A.D. Hippisley Coxen Gypsy*, in Enc. Britt.; Chicago, 1967, 10 1076:

"From the straits of Messina to the Baltic Sea, from Russia to Spain, the gypsies were enslaved, tortured, yes killed ... simply because they were gypsies", - further the Jews and the Muslims (remember the Spanish Inquisition).

In this connection reference should be made to the lepers, who in Antiquity and the Middle Ages were considered incurable, unless by miracle. "The development of medical science brought, from the end of the XVth century, a turnaround in the conception of leprosy. Hygienic care and therapeutic treatment resulted in a rapid decrease of leprosy and its virtual disappearance from our regions around 1300." (A. Viane, Leprosy and leprosy farms in Flanders, in Coll. Gane et Brug., VII, (1961): 3, 289/292).

Which M. Foucault, o.c., pp. 13/15, affirms;-but the empty leper rows are going to accommodate, first, briefly, the venereal sick and, then, for a few centuries at least, the insane: what would remain, however, after the disappearance of the lepers, are the conceptions (the "structures" says the structuralist) by which the lepers were delineated and expelled: one will certainly delineate and expel them as well, though now in the "rational" sense (and no longer in the ecclesiastical sense).

1/ Insanity,2 / deviation from the group, 3/ to be branded and 4/ to be scientifically fixed in theoretical concepts, these are the four aspects that remain through the variations of the prevailing ideologies (ecclesiastical or secular).

Conclusion. A. Koestler, Les somnabules, Paris, 1960, although a liberal Jew and opponent of Nazism and Communism, takes issue with the nationalist heroism of Galileo and accuses him 1/ of lack of evidence for his own theory and 2/ of bad character. Canguilhem thereupon says that Galilei, for the time being, could not do more but had the right direction.

Th. Kuhn, The structure of scientific revolutions, Meppel, 1972, 1972-1, 1976-2, p. 140vv. describes Galileo's revolution as a change of world view. 'Paradigm' is a key concept:

a/ it means the whole set of beliefs, values, techniques etc. that 'a given community (e.g. the Aristotelians, the scientists from Galileo onwards, etc.) have in common; that is the broad, sociological meaning;

b/ the narrow one is a part of it, the model solution of a problem (so e.g. Galilei 's synthesis of theory (in his case geometric-mechanical) and experience (experiment)) - cf. o.c., 199. - Well a new paradigm changes perception itself:

- (a) "Since gray antiquity, most people have seen some heavy body swinging back and forth on the end of a wire or chain until it finally came to rest.
- (b1) For the Aristotelians, who believed that a heavy body, by its nature, is moved from a higher position to a resting state in a lower position (i.e., their 'paradigm'), swinging back and forth was simply an impeded falling motion. (...).
- (b2) On the other hand, when Galilei looked at the body swinging back and forth, he saw a pendulum, a body that almost succeeded in repeating that same movement an infinite number of times (i.e. Galilei's paradigm or concept of fall of bodies)." (o.c., 140/141). Aristotle's and Galilei's observations are both equally accurate, yet the paradigm with which they approach movement means that they do not see the same thing: they each live in a 'different world'-. This brings to mind *J.H. Van den Berg, Metabletica* (doctrine of change) and related.

The 'epistemological cut',

i.e. the break in ideas about reality, which the scientific revolution represents, has a second basic figure, albeit of an entirely different nature, namely Francis Bacon of Verulam (1561/1626), the man of scientific reform. Whereas Galileo (and Descartes) focused on deduction (without neglecting induction), Bacon focused on induction.

a. - Induction

Induction is generalization starting from concrete, private or singular cases. There are types.

- (i) The improper induction, better called 'complete enumeration' (summative induction), also called Aristotelian 'induction': "Man, the horse, the mule, they all live long; well, man, the horse and the mule are the (only) gall-free living creatures; therefore all gall-free living creatures live long." Such reasoning fits only with additive sets of data.
- (ii)a. The Socratic induction (first type of actual induction): it generalizes from the individual to a species (from Alkibiades, Aristarchos, Charikleis et al. to the 'species', i.e. man). It is logical in nature, in the sense that concepts are central and include conceptual contents and encompasses.

(ii)b. The Baconian induction (second kind of real induction): this is generalization not of conceptual contents in general but of one type of conceptual content, namely, the relation of cause to effect between two phenomena. Even if one has established a causal relation between two phenomena only a limited number of times, one can still consider it a law.

It is called this generalization (Bacionian) because Bacon was the first to describe an ancient phenomenon as

1/ to its scientific scope,

2/ formulated the rules of it and

3/ and spread its use in the sciences. cf.; Ch. Lahr, Cours de philosophie, t. I (Psychologie et logique), Paris, 1933, p. 119ss.

b. -- The controversial nature

This is evidenced by the fact

a/ that Port-Royal sees in it an imperfect science (given the incompleteness of the enumeration of all cases),

b/ That Locke and Reid only see probability calculus in it,

c/ that Hume, Stuart Mill and the positivist and see in it a kind of association (an expectation that what one has established a few times will always and everywhere occur), not of real causation but of mere succession.

In fact, there is more: objective nature itself is lawful. Or: causes operate in a uniform way (in nature). This principle of lawfulness serves as a major in subsequent deductive syllogism: "The order of cause and effect is constant (nature is lawful); well, one establishes, e.g., a causal relation between heat and the expansion of a metal; so this singular causal relation (i.e., heating leads to expansion) is constant (it will occur everywhere and always)." (o.c., 194).

c. - Inductivism and deductivism.

Inductive reasoning is when it introduces a new fact that was not present in a given; *deductive* it is, when it introduces a new explication into a given. In this sense, every fruitful reasoning is both impression that (in deduction the singular or private case) and deductive (in induction the generality).

Taine, Fonsegrive, Cardinal Mercier pointed out that both reasonings are two types of one basic reasoning, concluding either from (private or singular) facts to their law or from the (universal) law to the (private or singular) fact. (o.c., 597).

This means that there is a lemma (or something assumed to be unknown), also in the inductive behavior, e.g. in verifying that (a sufficient dose) of quinine cures fever. The difference with analytic processing (see above p. 30) lies in the fact that one does not test the relations by arithmetic, but by physical action (which means that, as C.S. Peirce claims, physical action has at the same time a mental scope (and thus implicit analysis). - One can compare this to a 'black-box manipulation' in electricity.

For example, one does not know which of the wires applies to which current; one supposes that this wire might apply to that current and one connects: the result decides (because the wire (current) reacts lawfully); thus, in the long run, one knows what is sticking in the black box. The "black box" understands:

a/ the unknown

b1/ is treated lemmatically (one pretends) and

b2/ tested (analyzed through the physical actions, in which there is implicit analysis of the true nature): lemmatic-analytical method as Platon applied it at the time to the ideas and its relations. Another, even stronger example:

"Naturam morborum ostendunt curationes" (the cures expose the nature of diseases) is an old Latin maxim. The doctor a/ doesn't know which disease has the disease right (unknown);

b1/ but based on his diagnosis he assumes it is disease X. (lemma); he pretends it is true and

b2/ gives a given therapy (the operation) that gives results r (implicit analysis). If cure follows do, then the conclusion is that the diagnosis was correct; if not, then that it was false; ... Unless the result was reached by chance (which should never be excluded a priori: the margin of uncertainty always present in empirical things).

The scheme is always the same: here the black box is the disease. The unknown (nature in some component) responds to operations; its reactions 'show' (ostendunt) how it works (and what its lawfulness is). In other words, nature, provoked - the scholastics defined 'experimentum' as 'tentare' (to tempt, to request, to put to the test: tentare est proprie experimentum sumere de aliquo ut sciatur aliquod circa ipsum (to tempt, to provoke is actually to try someone (something) in order to know something about him (or a thing)), reacts and shows itself in its being (lawfulness). Modernly expressed:

a/ matter and/or energy,

(b1) subjected to processing,

b2/ shows the information present in her.

This is also the structure of the behaviorist (behaviorist):

a/ he does not know what precisely is going on in the soul of the subject (unknown);

b/ by the perils (stimulu) - which always presupposes a lemma: the subject thinks, feels, wants, experiences something that, once subjected to a stimulus, he will reveal ('show') he provokes the pp. who reacts. This view is at the heart of C.S. Peirce 's pragmatism.

d-Bacon's Ideology Critique.

The word 'ideology critique' is new but its praxis is old; at least with Bacon it is present to some extent. Like Galileo, he makes a thorough break with current opinions:

- (i) the books, the authorities in the universities, the apriori speculation, the prejudices, all this must be put in brackets;
- (ii) especially antiquity, except for the atomists (Democritos et al.) should be put in brackets: the ancient philosophers rarely, and even then superficially, engaged in observation;

The scholastics went the same way: they lost all contact with reality;

(iii) our so called "knowing" is filled with the prejudices, "idola" (idols, dream images): a/ idola tribus, drudgery peculiar to the entire human race;

b/ idola specus, illusions proper to the cave (in which cf. *Platon's Politeia* 7, the people live), i.e. to each individual: each creates his own illusion cave by his disposition, habit, education, size, reading,

c/ idola fori, drudgery of the marketplace, where language with its words beguiles;

d/ the fallacies of philosophical lore: even Copernicus and Galilei, according to Bacon, bring their calculations to coherence through invention, and the beauty of their rational and mathematical systems drowns out the truth of them.

Conclusion: the philosophy of nature can only come about in a muddled way,

a/ with Aristotle, by his logic,

b/ by Pythagoras and Platon,

c/ with the Neo-Platonists, by the mathesis, which is to end the philosophy of nature and not produce it. Behold the first, 'critical' part of his *Novum Organum scientiarum* (New Thinking Instrument of the Sciences) (1620).

a/ - Bacon's science reform program.

Instead of a-priori systems, Bacon wants organization, an association of scientific workers, who collectively build science. What directly gave rise to the first actual foundation of a scientific society, the Royal Society, a well-organized and provided with the necessary group of explorers will bring "the facts" to light, rather than all possible systems of thought. Their method is the Baconoan induction (second part of the *Novum Organon*), viz:

1/ not a-priori like classical metaphysics,

2/ also not simple enumeration (like ants, anecdotal empiricists accumulate nothing but induction material, nothing more);

3) No, like the bees, explorers process the factual material by their own power, i.e., by patient and conscientious study of the facts; they constantly and gradually rise from individual (singular and private) experiences to more general judgments, like a judge who interrogates nature. The positive and negative results (tabulae praesentiae, tabulae absentiae) analyze the factors at work in methodical experience.

f. - Baconian science classification.

- (i) Bacon is the founder of experimental philosophy and of empiricism or positivism concerning philosophy: 'n from inductive work metaphysics is as good as meaningless; philosophy and inductive science go together,
- (ii) This inductive science and the philosophy connected with it are thoroughly separate from theology, which he strictly distinguishes from the speculative philosophy that rises from induction. In this he is a nominalist.

Decision: - F.A. Lange, Gechichte des Materialismus, (History of Materialism,), 1866-1, I, S. 263 sees Bacon as one of the founders of modern materialism (from Hobbes and Locke to the French materialists of the 18th century), yet accuses him of superstition and unscientificity, above all because of his belief in the far-reaching role played by 'spirits' in his conception of nature, which he derives from the Theosophists (Neo-Platonic, Arabic) in order to bridge the gap between spirit and (gross) matter (and as being either sympathetic or antipathetic to extraterrestrial 'spirits'). One is still familiar with the expression 'spirits of life': well, this is what Bacon is talking about.

E. Vorgländer, Philosophie der Renaiss., Hamburg, 1965, s. 125, says: "According to English thought, knowing confers power, and Bacon has found new formulas for the this basic attitude. Man, having lost his power over nature through the Fall, must now regain his dominion over nature: such is the meaning of the 'magna instauratio imperii humani in naturam' (the great foundation of human mastery of nature). This was first of all a pure program, which was not based on any formative work. Vorländer immediately reproached him for his strong desire for honor, wealth and power, as well as his passionate desire for knowledge.

A. Weber, Histoire de la philosophie Européenne, Paris, , 1914-8, p. 279, compares Bacon with Hobbes, who explicitly advocates a materialistic metaphysics and who places a greater value on logic and especially on syllogism than Bacon, who disparages syllogism...:

"In declaring induction to be the universal method, Bacon, on the one hand, misunderstood the role of deduction in mathematics, and on the other hand, failed to see the mathematical element and a-priori speculation in the discoveries of the XV- century."

Indeed, the antithesis to Galilei, Bacon wants to build a mathesis-free science and advocate a theory-free method. Which in retrospect has proven to be wrong.

"Modern studies repeatedly bring to light that the empirical element in the scientific revolution - taking this word in its rawest, least philosophical and most craftsmanly sense - was largely exaggerated; at once we learn to attach more and more importance to its comprehensible and intellectual aspects." Thus, R. Hall, The Scholar and the Craftsman in the Scientific Revolution, in B. Tierney et al, Great Issues in western Civilization, II, p. 71.

Indeed, as Canguilhem says, science is that praxis which invents a method of approaching an object of inquiry so that the statements are possible and come about which, together, make up a theory, amenable to scrutiny (*Etudes d' histoire et de philosophie des sciences*, (Studies in the history and philosophy of science,,), Paris, 1975-3, pp. 16/17).

Yes, according to A. Koyré, science is "theory" and theory is fundamentally "mathematics" (as with Galilei (o.c., 14). Which Bacon with all empiricists all too misunderstands.

Note on Renaissance philosophy of law and state.

H. Védrine, Les Philosophes de la Renaissance, p. 86, writes:

a/ "The Middle Ages had lived on two myths, which the facts had never allowed to materialize: to the unity of the empire belonged the unity of Christendom." Indeed, after the feudal-theological social ordering of the Middle Ages

b1/ comes the development of modern national states, especially from the XVIIth century onwards, which claim to rely on the consensus populi, on the consent of the people, who cede their powers to representatives, chosen by them, at least where democracy comes into play.

b2/ Internationally, European (and gradually planetary) society is balanced by a few strong national states, which, each around itself, and gestalt of (world) territories - geopolitically - arranged, most on the grounds of military power and war as ultima ratio, as last rule of conduct.

The "New Philosophers" and the Modern State.

The Neo-philosophical voice that has been reverberating since June 1976 (B.H. Lévy in Nouvelles Littéraires), has made the theme of the modern state very topical (cf. S. Bouscasse/ D. Bourgeois, Faut-il brûler les Nouveaux Philosophes, (Should the New Philosophers be burned?), Paris, 1979 (// Dt: Kulturrevolution und 'Neue Philosophen', Hamburg, 1978).

G. Schiwy, o.c. 200, notes the strong parallelisms between the Princetonnosis (cf. *R. Ruyer, La Gnose de Princeton*, Paris, 1974, on the group of physicists, astronomers, physicians, and biologists of Anglo-Saxon or Asian persuasion, known by that name since 1968) and the New Philosophers, who are the pupils of

a/ a disappointing May 1968 and

b/ the language and discourse critique of poststructuralism (Barthes, Foucault, Lacan), including on religion and apolitical stance:

"The 'New Philosophers' (join the Princeton-gnosis point of view) to the extent that those regimes that can be considered products of the enlightenment (of the XVIIIth century), humanist, materialist, Marxist or capitalist - have never kept their word. This is due in part to the anthropocentric aspect of these systems of thought, which gradually tended to hand man over to the powers that be in its worst form in the introduction of the omnipotence of the State in place of the omnipotence of God."

Thus e.g. *B.H. Lévy, La barbarie à visage humain*, (Barbarism with a human face), Paris, 1977, p. 71, accuses Fr. Bacon, through his new concept of 'causality' (as a scientific concatenation of the moments that make up time as sensed by the techno-capitalist bourgeoisie), of having helped to construct the modern concept of history as a history of (political and state) power.

And A. Glucksman, Le discours de la guerre, (The discourse of war,), Paris, 1979, pp. 93/94 puts Machiavelli, Clausewitz, and Lenin on the same footing.

"Machiavelli: excluded from the political life of Florence at the age of 43 -years. Inconsolable. Forced during fifteen years of non-activity - writes the first political treatise, the first book on strategy and the first modern history. Three paths that definitively delineate the sole object of European passion - political action" (o.c., 33).

Indeed, Clausewitz, the German romantic on strategy, ran afoul of Machiavelli; and Lenin, as a Russian emigrant at Berne, in 1915, read Clausewitz, which he will apply in building the Soviet state. Cf. *E. Mead Earle et al, Makers of Modern Strategy (Military Thougt from Machiavelli to Hitler)*, Princeton University Press, 1944, p. 25 (concerning the Machiavelli-Clausewitz connection).

And: like Engels, Lenin had read, commented on, and pondered Clausewitz. Speaking of Clausewitz's infamous statement, "War is politics continued by other (violent) means," Lenin said, "Marxists have always regarded this axiom as the theoretical justification of the meaning of every war." (V.I. Lenin, Works (English translation, New York, XVIII, 224 (...)).

He was, further, convinced that there was a close connection between, on the one hand, the structure of the states the system of government and, on the other hand, military organization and the policy of war. From Marx and Engels, among others, Lenin acquired the eye for the real things proper to power politics." (o.c., 323). This is to say that, whatever his Marxist opponents may say of the "vague" thinking of a Glucksman, he is at least well informed here: there is a very direct causal chain (cf. Bacon's conception of history as Lévy sees it) that runs from Machiavelli over the strategist Clausewitz and Marx and Engels to Lenin and Stalin.

The study of the Renaissance figure Machiavelli is therefore the study of our own time. Hence this digression.

Machiavelli, Nicolo (1469/1527).

Machiavelli is a typical Renaissance man: his *Discorsi sopra la prima decade di Tito Livio* (Discourses on the first decade of Titus Livius), contrasts well-ordered Rome (of Antiquity) with ill-ordered Florence (of his day). Machiavelli does not 'escape' into antiquity: it is for him exemplary in view of the rational ordering of the state. Among other things, he is a supporter of Polubios' (-203/-120) circular conception of history.

This great historian of Rome thought that:

a/ the people choose the monarch from among the best and strongest; that choice monarchy develops into hereditary monarchy, to degenerate into tyranny.

b/ This in turn is overthrown by the best: the aristocracy takes its place, to degenerate into oligarchy.

c/ This in turn is replaced, by popular revolt, by democracy, which in time degenerates into anarchy. This in turn awaits the monarch who once again establishes order in the chaos.

It should be noted, however, as *K. Vorländer, Phil. d. Ren.*, S. 100, observes, that this Polybian theory was not 'fatal' to Machiavelli: the 'virtu', man's own rational power, could change it to the course. This belief in the supremacy of reason was also the true reason for his reverence for ancient Rome: Rome's armies, its imperialism, were results-oriented because they were intellectually elaborate. He saw in them the eternal model for all nations.

Opposite the Discorsi is *Il Principe* (The Sovereign) (1513) where the *Discorsi* describes the republic of "virtuous" men, there Il *Principe* talks about the way in which the sovereign efficiently acquires a kingdom, preserves it and eliminates his enemies in order to preserve power. In fact, according to *Védrine, Les Phil. d.l. Ren.*, 90, the same conception prevails in both works: only the strategy differs. In *Il Principe*, power is achieved by the individual, the sovereign, who has united virtu and happiness: in Discorsi, the people, thanks to their control, create the virtu of all and thus the conditions for a state with power. Both books are about the power of the state, about its acquisition in custody.

In his Arte della guerra, his rational theory of war, Machiavelli says: "Many today hold the opinion that no two things are more contrary than a civil and a military life. Yet, if we examine the nature of government, we shall find a very strict and close relationship between these two modes of life, and recognize that they are not some coexistence and interdependence, but that they are necessarily connected and united." (cf. F. Gilbert, Machiavelli (The renaissance of the Art of War, in E. Mead Earle et al, Makers of Modern Strategy, p.3).

With that text *Machiavelli*' introduces his *Arte della guerre*. In *Il Principe* it reads, "There can be no good laws where there are no good weapons and, where there are good weapons, there must be good laws. (o.c., 3). In the *Discorsi*: "The foundation of states lies in good military organization." (ibidem). He, Machiavelli, is therefore "the first military thinker of modern Europe" (o.c., 12).

a/ The ethical war view of the scholastics, who subjected war to strict moral rules, became,

1/ by the Renaissance humanists, replaced by the enthusiasm for Rome's military history as the core of history without question, signifying political greatness and

2/ by the new scientific revolution, underpinned by the new natural science and its technique. (o.c., 21). Machiavelli incorporated this into his political and military rational theory.

b/ Through his étatism and his rationalism, he has stripped virtu of its moral essence and turned it into mere efficiency. Listen: it is not necessary for a sovereign to possess all the qualities (...) nevertheless it is necessary for him to have the appearance of possessing them all.

And I would even dare to say that if he possesses them and always puts them on, they harm him. Yet, if he maintains the clean appearance of possessing them, then they are useful: so e.g. looking wretched, faithful, human, flawless, religious-and being it-, but with your mind directed that, if you should not be it, you are able and cunning enough to use the opposite." (cited by Védrine, o.c., 95).

'Machiavellianism' (also known as realpolitik) consists in that one:

a/ achieving the moral good goal, the state and its power, source of well-being for all,b/ make it dependent, not on morally good means alone, but on all means, with the elimination of the morally good, if they harm the (morally good) end, state power.

So it is not immoralism but neither is it moralism: it is being centered on the end, state power, 'right or wrong', through thick and thin, but preferring the morally good means or, at least, their appearance. 'Realism' in the political field, - better: utilism (what is useful, prefer it) and well state utilism (what is useful for state power, prefer it).

E. Faul, Der moderne Machiavellismus, (Modern Machiavellianism,), Köln/ Berlin, 1961, acts

1/ About Machiavelli 's time (and the salve he found on it),

2/ on the transformation of Machiavelli 's state-utilism after him (W. Raleigh, O. Cromwell, - D. Diderot, J.J. Rousseau), further on the 'Realpolitik' as a rational fusion of a/ state policy, b/ economy and c/ military necessity (the national wars of liberty, especially the French Revolution, as instigators of the 'Realpolitik')) and on the Machiavellian elements in the social ideologies (Marx, the Marxists; Nietzsche, the Nietzscheans, Sorel).

Th. Morus (1478/1535) designs the opposite of Machiavelli in his *Utopia* (he is the first modern utopian) (1516). *Erasmus* (1467/1536) writes his *Textbook of the Christian Monarch* (1516), opposing Machiavelli s view. All Catholic and Protestant moralists attacked Machiavelli.

Religious "monarchomaniacs" (monarchists, who stand up for the rights of the people and the individual itself, from all Christian confessions, including Bellarminus and the Spanish Jesuits) take a stand against it. Even J.Bodin (1530/1596), monarchist, restricts the "absolute" monarchy as a connector of democracy (equality) and the aristocracy.

Then there are the advocates of natural law, J. Althusius and especially Hugo Grotius (de Groot) (1583/1645), an open and free spirit related to Erasmus. His ancient models are Aristotelian (man as a "political" being) and the Stoa (cosmopolitan man, who founds the law of nations). And, as Albericus Gentilis (1551/1608) replaces or controls the accidental and changeable aspect, rather, by the universal natural law, so does Grotius.

This distinguishes three arrows of right:

a/ the positive law,

which is singular (applicable to one people, one tribe e.g.) and private (applicable to several, but not all, peoples or tribes), 'positive' (thetikos, positivus) is twofold:

- (i) modal: what is factual as opposed to 'negative', i.e. what is not factual (so e.g. with the Scholasticians and Herbart ('postulate' in his case means 'actually state')).
- (ii) (cultural)historical: that which exists through singular-private (human) intervention; so e.g. religiously, positive religion (which exists through the intervention of the prophets, e.g. the Biblical) or, legally, positive law; this is, of course, not very in the style of the scientific, law-abiding (i.e. general) revolution;

b/ the "natural" or natural law;

there is, says Grotius, in every man as an individual, a natural sense of law ('written in the heart'); this naive, unthinking sense of law comes to conscious and rational formulation in the system of natural law fundamental concepts or categories; both, sense of law and system of law, are immutable and everywhere diffused (syn- and diachronic universality); they are the core of positive law, which is the temporal and spatial adaptation of it and of varying situations; - what is new is the emphasis on the independence of the legal order (and of legal science and philosophy): "Natural law is so immutable that it cannot be changed even by God (...).

Just as God cannot make twice two not four, so also he cannot make that which, according to its inner nature, is bad, does not become bad." (De iure belli et pacis (1625)). From there Grotius broke free from the theological-confessional viewpoints on the matter. Reason is the epistemological instrument that recognizes what corresponds to the "nature" of man, basis of universal law.

The state, for example, came into being thanks to the will of individuals; the right of those individuals vis-à-vis state power can therefore never devour it: Grotius here confesses himself a supporter of the popular sovereignty doctrine (even though he assumes that the sovereign people can cede their founding power to the sovereign or to a class of delegates).

Treaties, promises, according to a condition of their possibility, themselves supported by an even deeper treaty or agreement of all, should be respected - which contrasts sharply with Machiavelli 's amoralism and nullity reasons. - The law of nations is the international elaboration of the law of nature, which is binding on all.

c/ A special divine right,

that the commandments of the Sermon on the Mount express, is by a "higher sanctity" the superior of natural law. Grotius "made a mighty impression on his time and dominated the whole philosophy of law for a long time." His law has become the fundamental law of the official West (*K. Vorländer, Ph. d. Ren.*, 109/110).

Note.-- 'Right' is not so easy to define:

H. Kantorowicz, Der Begriff des Rechts, (The concept of right,), 1963, distinction 'right',

a/ on the one hand from the similarities to be found in nature and society, in a general sense, and

b/ on the other hand, of the rules of the soul and moral (ethical) norms. 'The' law he defines as **i**/ a system of rules **ii**/ which prescribe external behavior (a kind of behavioral description thus or behaviorism) and are seen as amenable to justice (judicial aspect).

Justice, in the strict sense of reverence, in will and deed, for the law so defined, is a part of the profound (and ethical) concept of justice (righteousness), if only because justice belongs to our inner convictions.

Note.-- (i) *The opposition* between state-utilist and ethical (including natural law) views will return

a/ in TH; Hobbes (1588/1679), with his authoritarian pessimism understanding 'nature', in a nominalistic sense, shows us the 'right' of 'the strongest' ('Bellum omnium contra omnes', war of all against all), whereby the state, by virtue of absolute obedience, offers protection to the benefit of all; cf. Mandeville) and

b/ in the successors of Grotius, who espouse a liberal optimism based either on nature or on an authoritarian decisive God (S. Pufendorf, with a Scotist-nominalist view of God).

(ii) *The opposition* between legal positivism and natural law also returns.

a/ One thinks of phenomenologists like A. Reinach, Die apriorischen Grundlagen des bürgerlichen Rechts (The a priori foundations of civil law), (1921) or logical empiricists like V. Kraft, Die Grundlagen einer wissenschaftlichen Wertenlehre (The Foundations of a Scientific Theory of Values), (1951-2):

Reinach does an essential description of a legal relationship to arrive at the essence of civil law;

Kraft sees man as a being with certain needs, who imposes a set of standards on the society, which he creates (and arrives at a changing natural law).

b/ One thinks further of dialectical materialists like *E. Bloch, Naturrecht und menschliche Würde* (Natural law and human dignity), 1961): where the classical Marxist scorns "law" as an instrument of power of the ruling class, there Bloch says:

"Without the run-up of justice from below, no human rights are introduced"; these human rights include, among other things, the right to a society for a human being released from the dispossession of capitalist society, after the revolution (Bloch, in this sense, traverses the history of thought from the Sophists to the present on "natural law").

One thinks of the existential thinker *K. Jaspers, Vom Ursprung und Ziel der Geschichte* (From the origin and goal of history), (1949), who, starting from the essence of man, i.e. his freedom together with others, arrives at a right to a society, in which he can live out his being (and thus norms instead of a mere right to a situation).

Thus one sees that both the theories of power (Machiavelli, Hobbes) and the theories of natural law either oppose each other or replace each other according to the circumstances. This also shows the unstable character of the 'rational' foundation on which they are built. After all, there have always been righteous people, without and long before modern theories of law or power. Which means that right-sensitive behavior is pre-rational, while the 'theory' is merely a 'rationalization' (i.e. translation into rational terms) of 'right-sensitivity', unless, e.g., it is a cover behind which unjust behavior is hidden.

(iii) The opposition between church and state,

present in the Middle Ages, is returning. Pope Gelasius I, in a letter to the Byzantine emperor Anastasios, in + 494, said that there were two 'sovereign' forms of behavior: the priestly and the princely 'church' and 'empire'.) Each has its own sphere of power (religious-ethical matters, the so-called faith and morals, and secular matters, the 'secular'). This "dyarchy" (duo + archè) is defended, in the XVIIth century, by R. Bellarminus (1542/1621), who found the "temporal" or "secular" power of the pope undesirable, but who also found the "divine" or "absolute" right of the monarch illegitimate.

However, the "absolute" monarchs of the XVIII century, af, replaced the Gelasian dyarchy with a one-power system, theirs. According to Father Courtney Murrayn S.J., (Time 12.12..1960, pp. 42/46)

1/ the absolute monarchy, via

2/ the Jacobin republic of the French revolution, until

3/ today's totalitarian democracies, which grant "civil government an almost complete control over ecclesiastical affairs" (a.c., 45). In other words, they are democracies with 'divine' (pseudo-divine, of course) 'law'. Something today's neo-philosophers note.

(iv) The contradiction between state and science

also returns: just as the Church (and with her the "secular arm") in the Middle Ages tried to get or keep the "intelligentsia" on its side, so too the modern state, in its absolute form. It is said (E. Paul) that Realpolitik is the rational fusion of state policy, economy and army, but one may add science. - Problem that persists to this day: J. Habermas (1929/....), assistant to TH. Adorno (Frankfurter Schule), distinguished three models

a/ the decisionist (the politician decides, the scientist, independent of him, provides the means),

b/ the technocratic (the scientist, master of technology, decides, the politician applies),

c/ the pragmat(ist)ische (both, though with strong intervention of public opinion, dialogue with each other).

(v) The opposition between "rational" and "occult

also returns. State policy, economics, military power and sciences together form "Realpolitik. However, in disguise, occultism also plays a part in realpolitik.

Those who want to know more about this can, if necessary, have at their disposal piles of books and articles, of which one never quite knows to what degree they tell the truth, yet of which it is certain that they contain truth and that is the decisive thing here.

- S. Hutin, Les sociétés secrètes, Paris, Puf, 1963-5, e.g. is an excellent introduction. Hutin distinguishes political secret societies and initiatory secret societies (o.c., 6).
- (A) Among the medieval initiates he mentions the Templars, founded in 1117 (cf. e.g. *G. Bordonove, Les Templiers*, Paris, 1977). The Rosicrucian brotherhood comes to light, as far as is known, according to S.Hutin (o.c. 52) in 1598. J.A. Comenius (1592/1670), leader of the gymnasium at Lezno (Czechoslovakia), leader of the Moldavian friars (a sect) belonged to it) (he is, cf. *P. Virion, Bientôt un gouvernement mondial?* (*Et une super et contre-eglise?*), (Soon a world government? (And a super and counter-church?)), Rennes, 1967, pp. 6/11, the designer of a synarchy, i.e. a planetary government, which is both universal church and international council of culture and oriented towards peace, a design which is still active in occult circles today).

In 1650 the Rosicrucian Brotherhood is powerfully organized in England (there, from there, they will introduce the system of 'High Degrees ('Scottish degrees' also called) into Freemasonry (o.c., 55).

In 1717 the Grand Lodge of Freemasonry was founded in London (consisting of four lodges). Freemasonry was introduced into France in 1730 (cf. 64-65).

- **(B)** Among the political secret societies S. Hutin repeats, o.c., 85, that the distinction between purely initiatory and political is often difficult to make mentions the work of the Illuminati of Bavaria (A. Weishaupt; 01.05.1776), the French and Italian Carbonari (forest freemasons) in the XIXth century, the Irish secret societies (in 1781: the United Irishmen swears to shake off the English yoke at Belfast; the Sinn Fein and the I.R.A (Irish republican Army) follow later), the American Ku-Kux-Klan (founded at Nashville (Tenessee) after the War of Secession), the Sicilian Mafia (founded early XIXth century).
- (C) Then there are also the criminal secret societies (after 1452 numerous in France e.g. (o.c. 117), but certainly up to our days active everywhere). On Nazism as an occult power see *L. Pauwels/J. Bergier, La matin des magiciens*, (The morning of the magicians,), Paris, 1960, pp. 241/367.

On a city with occult tradition see *P. Leurat, La sorcellerie lyonnaise*, (Lyon's witchcraft,), Paris, 1977: the XVIII century, century of 'reason', was also the century of Freemasonry, of magic and witchcraft and, as Louis Trénard notes, "Unlike Paris, encyclopedic center, Lyon grew to be the capital of esoteric activities" (o.c., 51).

To this day occultism plays a role: cf. *J. Bergier, La guerre secrète de l'occulte*, (The secret war of the occult), Paris, 1978 (a.o. K.G.B., C.I.A.).

(vi) The 'state/economy' contradiction.

Politics is not economics. However, *P.J. Bouman, Textbook of Economic History*, Amsterdam 1947, p. 74, writes:

"In the late Middle Ages, the modern centralized state emerged (Burgundy, France, England). This fact also became of great significance for economic history. Indeed, the modern state subjected all interests to the maintenance of its independence. It recognized no higher power above it, not even the church. The doctrine of state sovereignty implied a recognition of the right of the strongest.

(...). Wherever powerfully governed and strictly centralized national states arose in the new history, these states were seen to include economic life in their power politics.

The pursuit of state economic organization is called mercantilism. Mercantilism, which differed from country to country, nevertheless had two features:

- (i) the multiplication of the precious metal (there was no paper money in circulation yet), symbol of prosperity of trade and business, and
- (ii) the composition of the (preferably favorable) trade balance, i.e., the ratio of imports to exports (if exports exceeded imports, then the balance was favorable).

In France under Louis XI (1461/1483, later under Colbert (Colbertism); in England, under Henry VII (1485/1509); in Germany, begun after 1648 (chamberalism), mercantilism dominated the economy for two centuries.

Note -- *P. Vervaeke, Sales current affairs*, in *De Nieuwe gids*, 09.11.1962, talks about the influence of N. Machiavelli on Western sales views:

"What may well pique the interest of any salesperson: the awesome topicality of Machiavelli in our sales jungle. The Renaissance thinker Machiavelli exerted an influence on Western sales mentality the depth of which is not suspected. He made a mark on our civilization. Throughout the centuries, Machiavellianism (the statecraft that deems all means good) was relentlessly recommended and our subconscious became more loaded with it.

Our way of selling also underwent that pressure". (a.c., p. 13). This is especially evident when, for example, one compares archaic or Eastern sales techniques with Western modern ones. Since the Renaissance, our entire economic life has taken on a Machiavellian tint, which can so shock people from other civilizations. One calls our methods the "aggressive" ones.

On the Renaissance background, that qualification is not surprising, though. - With all that said, one more comment:

1/ "During the Middle Ages, socio-economic thought (...) was largely collective in character (...).

2/ Representatives of a fairly advanced industrial capitalism, on the other hand, such as the Flemish and Italian drapers, already thought much more self-centeredly and individually. (...). The turnaround (...) was hastened by the breakthrough of Renaissance and humanism".

The centerpiece (...) of this period is the cities and their civic culture, no longer the castles and monasteries. Apart from the important role played by commercial capitalism, Renaissance culture is based on the principle of handicraft production, taken over from the

Middle Ages and now absolutized. From this grew the bourgeois spirit of a 'homo faber': what I know how to make, thanks to the dexterity of my hands and the insights of my mind, I can control. (...).

1/ Performance principle, 2/ striving for ascendancy and 3/ individualistic competitive thinking change the stagnant nature of the medieval economy. Trading houses and guilds of considerable importance clothe the globe with their money economy as far as is known. The peasants, stimulated by the example of the free urban bourgeoisie, covet greater independence." (*Th. Suranyi-Unger, Wirtschaftsphilosophie des 20. Jahrhunderts*, (Economic philosophy of the 20th century), Stuttgart, 1967, S. 27).

This is to say that the mercantilists, who had no economy of their own, subjected an economy to themselves, which had come about thanks to venturesome merchants and risk-takers (o.c., 28). However, in time, the third estate will no longer 'take' this subjection to the mercantilist state.

As *H. Pesch, Das christlich-soziale System der Volkswirtschaft*, (Economic Philosophy of the 20th CenturyThe Christian Social System of Economics), S. 23/24, says, it follows: 1/ to mercantilism, with its emphasis on exports and foreign trade,

2/ the physiocracy (with its emphasis on soil cultivation) and

3/ The industrial system (which conceives of human labor as the pre-eminent factor of production).

In any case: the 'citizen' as we understand him, appears in Western history and only since the XIth century, speaking of 'the city' notes that

- (i) the "oriental" (oriental) city, which is not different from the village, can be found in the ancient and non-European cultures of high level, as well as in the Islamic, Byzantine and Old Russian (t.m. XVIIth century) areas,
- (ii) that the 'ancient' city, residence of the politès, cives, 'citizen' (though not in our sense since the XIth century), has no 'citizens' with full civil rights who practice industry and commerce (feudal lords does not know ancient Athens e.g.).
- (iii) That, in the XIth century, in northwestern Europe, between Seine and Rhine (northern France, the Netherlands, western Germany) and in northern and central Italy (Lombardy and Tuscany), the "bourgeoisie" and its "city" came into being (the commune). Cf. O. Brunner, Bürger und Bourgeois, in Wort und Wahrheit, VIII (1953): June, S; 419/426.

Conclusion: both the typical bourgeois city and the modern national state are typically 'Western'. Cf. Dumézil, Mythe et épopée (L'idéologie des trois fonctions dans les épopées des peuples indo-européens, (Myth and epic (The ideology of the three functions in the epics of Indo-European peoples), Paris, 1968: 1/ clergy (prayer stand), 2/ army (warrior stand) and 3/ labor stand are the threefold structure (Indo-European) already before Alfred the Great (1075/1100).

Overview of Renaissance philosophies.

The printing press is going to profoundly influence the spread of philosophical thought: *Marshall McLuhan* (1911/1980), that authoritative, Catholicized cultural philosopher and mass media theorist (*The Gutenberg Galaxy* (1962), *Understanding Media* (1964)) among the alternative-thinking youth, distinguishes three stages regarding media (i.e. any reality that enhances human capacity, - wheel, glasses, machine, - any 'instrument'):

a/ The archaic phase in which the spoken word is the medium of choice,

b/ The alphabetic script, meanwhile, wins its renaissance burst in the XVth century with Gutenberg, who enables the mass distribution of the printed word (book, newspaper, writing);

c/ the electronic media, especially TV, give a final blow to the literary Gutenberg era, in which logical thinking (classification, systemic order) goes hand in hand with the professional sciences, which emerge, and with modern-industrial society, in which the professional idiots, who are the scientists and technocrats, find their place.

Whether the tender anarchist that is McLuhan is right about that three-phase division is debatable, by the importance of the Gutenberg products, as he calls it, is evident. The sages are getting a wider audience than ever before in history.

Renaissance Pluralism.

'Pluralism' means a system of 'multiplicity'. Here 'multiplicity' concerning methods of interpreting reality. *P. Ricoeur, Vérité et mensogne*, (Truth and lies,), in *Esprit* (19 (1951): 185 (déc), 753/778, writes:

"The Renaissance has been, par excellence, the moment of awareness of the multifaceted nature of truth." (a.c., 753). Indeed, modern free inquiry is paving its way. 'Free inquiry' that:

1/ both with the new scientists (Galilei or Bacongericht), who consider nature to be "an open book for all",

2/ as is present among Protestants, who treat the Bible as an open book for all to read (cf. W. Bartley, Flucht ins Engagement (Versuch einer Theorie des offenen Geistes), Munich, 1964 (// Eng. The retreat to Commitment, 1962), S 33f.); - free research, which seeks to break the grip of the medieval clerical middle.

(i) The multiplicity exists first of all in terms of methods:

a/Galilei 's mathematical physics differs from

b/ Bacon's experimental induction;

c/ these methods differ from humanistic philology (in which language, literature, and history are central), for whom science is "a means of gathering reliable and well-founded information about a particular area of reality, so that one controls that information no matter what" (according to the anti-psychiatrist Ronald Laing, who argues that one cannot identify the scientific method with the experimental style (Galileo or even Bacon);

d/ people like *J. Dastre, la vie et la mort*, Paris, 1920,pp. 1/50, note that the study of life did not conceive of itself as experimental without more:

- (i) *mechanical* system (Descartes, Darwin, Haeckel, Lavoisier) and neo-mechanicists, for whom 1/ mind, 2/ life and 3/ matter are identical (except for mechanical structure-different);
- (ii) vitalists (Paracelcus, Van Helmont, Heidenhain, Gautier, Reincke (neo- vitalists),
 cf. Barthez, Bordeau, Cuvier, Bichet), for whom life is not identical
 1/ neither with 'spirit' (thinking soul) 2/ nor with matter;
- (iii) *animists* (Aristotle, Thomas Aquinas, Stahl, Chauffard, von Bunge, Rindfleisch (neo-animists), for whom life is identical with 'spirit' (soul), they each interpret 'life' in their own way and therefore differ from methods:

a/ vitalism and animism will not make peace with a mathematical-physical method alone:

b/ Current molecular biology continues to spin the mechanistic yarn, yet it places the contingent facts of (evolutionary) history (molecules, cells, organisms, populations) one after the other in the context of "accidental" facts that found evolution: cf. *E. Morin, la révolution des savants*, (The revolution of the scholars), in *Le nouvel Observateur* (No. 317 (7/13.12. 1970, pp; 56/58)).

- Cf. *M. Ambacher, Les philosophes de la nature*, (The philosophers of nature,), Paris, 1974: especially (1) pp; 57/58 (1/ physicalists, 2/ naturalists (biologists), 3/ positivists do all think 'physical' somewhere but with variants;
- (2) pp. 79/122: the actual natural philosophers think **a**/ anti-mathematico-physically (Berkeley, Hegel), even **b**/ anti-metaphysically (in the sense of: against the metaphysics of life and science; thus Berkeley, Schelling, Bergson); which points to a multiplicity of methods **a**/ not only within the so-called positive sciences, **b**/ but also within thought without more: professional science and philosophy diverge with people like Berkeley, Hegel, Schelling, Bergson, who call philosophy something other than pure thought-through professional science;

Immediately it is also clear that professional science and philosophy, separate as they are from patristic and scholastic theologies, are something other than "theology.

Conclusion: a/ (positive) professional science, b/ philosophy, c/ theology, - behold the new multiplicity of methods, which the Renaissance sees emerging (up to our days).

- (ii) The multiplicity also exists in the method of interpreting that multiplicity:
- (a) rightists (orthodoxy rightists), dogmatic as they are, call 'true' their own method and 'false' all others (exclusivity) from one position);
 - (b) liberals ("liberals" in the Anglo-Saxon sense) lapse into
 - 1/ Forbearers: all methods are (somewhere) "true" and are equal;
 - 2/ Unity seekers: no method is automatically 'true', yet what is common to all is 'true';
- 3/ eclectics: no method is automatically 'true', but in all of them there are elements that are 'true' and can be merged into a couple. The different philosophies of life (ideologies) also react differently to the quantity of methods:

a/ The (truly) liberal (humanist) extends the attitude of freely inquiring scholars to all aspects of culture: morals and religion, politics and economics;

b/ The non-freethinking tradition-bound exhibits two main types:

b1/ The church-going humanist, for example, understands the multiplicity of religions (and immediately cultures) in a Christian realist sense:

a/ there is an intellectual content, which is a universal property of humanity and in which all the main ideas of a civilization are contained;

b/ This content of thought is, by God's hand, in a primordial revelation, from the beginning of human history, destined for all people,

c/But in the pagan world he is fragmented and misunderstood, in the Christian world he is present, unified and correctly interpreted, - so that the deviated pagan world also reminds us of the ideal mother image, yes, it has a direct connection with it, like a side shoot attached to the trunk of the tree;

b2/ the theological humanist grasps the multitude nominalistically:

a/ comparisons of private and singular cases should lead to a classification, yes, to a system the religions (and civilizations based on it);

b/ It is mainly the opinions or views that count, not the thought-contents as the objective structure of reality;

c/ From the opinion survey one hopes to distill the common basic opinion (unity religion) (cf. O. Willmann, Gesch. D. Id., III, S. 171: (1) A. Steuco (+1550), Kustos der Bibliotheca Vaticana, stands for the realist, (2) Mutianus Rufus, Lutheran, who considered the pagan world to be utterly corrupted by the Fall (after Luther's pessimism of nature), for the nominalist view).

- *R. Niebuhr, Christ and Culture*, London, 1952, summarizes the five main attitudes a believer can take toward culture as deployed by the Renaissance:
- (i) the Tertullian-Tolstoy type (between Christ and culture there is irreconcilable enmity; man must choose radically);
 - (ii) the Christian-free type (Christ brings true culture);
- (iii) the Thomistic type (Christ transcends culture, by contributing to it in substantial ways);
- (iv) the Lutheran type (relative irreconcilability between Christ (believer) and culture (sinner), yet maintaining a certain loyalty to culture);
- (v) the Augustinian-Calvinist type (culture is thoroughly sinful; Christ converts, restores man, also culturally).

What Niebuhr forgets is the syncretism (in the religion of nature Christ is already present seeking; culture rises from both, though merged). Cf. also *Fr. Herder, Histoire doctrinale de l' humanisme chrétien*, (Doctrinal history of Christian humanism,), I-IV, Tournoi/Paris, 1948 (M. Ficino, Pico della, M., Lefèvre d' Etaples, Erasmus, Th. More, Fr. Van Sales and others as Catholic humanists of the first moment).

The stanzas. - These decay into two main stretches.

- (A) The tradition-building stretches.
- (i) *Spanish scholasticism* (see above p. 16: modern scholasticism), so called because the modernization of scholasticism began in Spain (application of scholastic method to problems of state and law) (see above on state and law); further: one purifies the philosophical language;

- Thus Fr. De Vitoria (+1546), O.P., founder of the Salamanca school, and Fr. Suarez (+1617), S.J. (Coimbra school) with influence on Catholic and Protestant scholastics and on Leibniz.
- (ii) *Protestant scholastics:* Melanchton (1497/1565), eclectic aristotelian, who rejects Luther's hatred of "reason" as the "bitch" of the devil.

(iii)a. The humanistic philosophies:

- a/ Pythagoreanism: Renaissance mathematics and astronomy is Pythagorean in background (cf. O. Willmann, Gesch. d. Id, III, S. 46/69 with detailed exposition; see above p. 30 (analusis process enriching mathematics platonically)); "The contemporaries label Co(p)pernicus' doctrine as doctrine pythagorica and J.Kepler has only one qualification: that it is not yet Pythagorean enough and does not let the world harmony do its full justice." (M. Cantor, Vorlesungen über Gesch. d. Mathematik, (Lectures on the history of mathematics), 1892, II). Which proves that Canguilhem is exaggerating when he minimizes tradition in the origins of the "scientific revolution.
- **b**/ *Platonism*: in Italy: *Mars. Ficinus* (+ 1499), the inspirer of the academia Platonica at Florence, in his *Theologia platonica* one has the typical Renaissance syncretism: **i**/ Thomistic notions; **ii**/ Stoic, Epicoerean (Lucretius' materialism), Hermetic (see above pp. 25/28) and Neo-Platonic conceptions, all this in a very hesitant 'synthesis'; Pico della Mirandola (+ 1494); low countries: Erasmus of Rotterdam (1467/1536); Germany: J. Reuchlin (+ 1522), Zwingli, the reformer (1484/1531).
- c/ Aristotelianism: P. Pomponatius (+1524), who tries to explain the miracles as purely natural (see above p. 26), J. Zabarella (+1589).
 - d/ Stoicism: J. Lipsius (+1006).
 - e/ Epicureanism: L. Valla (1407/1447), P. Gassendi, the French libertine (+1655).
- **f**/ *Skepticism*: Montagne (1533/1592), who at the same time held a stoic philosophy of life and believed in magic, like almost everyone else at the time.

(iii)b. Augustinian philosophy:

O. Willmann, o.c., S. 142/168, elaborates on the largely scholastic Augustinianism at that time, especially among the Oratorians; so does L. de Thomassin (1619/1695). The reason: "Wherever there was an aversion to the medieval school form and a desire to seek a new style of Christian speculation, there Augustine offered himself as the basis for it: the freshness and the immensity of his presentation of the facts gave the joyful realization that one could philosophize Christianly without scholastic questions and answers. The theology of modern times, too, saw itself as depending on Augustine in more ways than one." (o.c., 142/143). What in England and Italy provided (Neo)-Platonism, that in France provides Renaissance Augustinianism with a/ its starting point in self-consciousness and b/ its realization that God guaranteed the truth of our ideas,

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main themes found in Descartes (around 1628, Cardinal Bérulle, founder of the Oratorians, encouraged the young Descartes to study philosophy).

(iv) Historiography and the philosophy of history:

O. Willmann, o.c., S; 169/207 (theologische-philosophische Geschichtsforschung unter der Einwirkung der Renaissance) ((theological-philosophical historical research under the influence of the Renaissance), notes that the influx of historical information had an inspiring effect on philosophy and theology; - Agostino Steuco (Steuchus) (.../Agostino Steuco (Steuchus) (...), co-creator of the Vatican Library, expert in Greek, Hebrew, Syriac, Arabic, in his main work De Perenni Philosophia (1540 at Lyon) sets forth the first traits of a universal history of philosophy and also of a philosophy of history, for the time being too one-sidedly religious, yet very broadly oriented: the development of the primordial revelation (the wisdom of early mankind) runs over

a/ the hieratic phase of the ancient East and b/ the speculative phase of Graeco-Latin Antiquity c/ to the synthesis of both in Christian thought; he is making school (Pansa, de Plesss, Galanthes, Clesenius, Pfanner); - the English Platonists (Gale, Cudworth) are creating a terminology (theist/ theist, Hylozoist/ atomist, etc.); - French Augustinianism (Thomass), - even the Aristotelians (but especially historical-critical; Pererius) - one should not forget the widening of the horizon by missions.); - French Augustinianism (Thomassin), - even the Aristotelians (though mainly historical-critical; Pererius) - one does not forget the widening of horizons by the missions: India (Xavier et al.) China (Schall et al.) and their wisdom are discovered in the West, which thereby steps out of its medieval isolation; - all this will make possible later, 'n Vico (o.c., 181/187) with his Scienza nuove, historically oriented.

- (B) The innovative streak. (i)a. Humanist dialectics: L.Valla (1407/1447), as a true humanist philologist prefers the rhetoric that frames the syllogism, to the naked syllogism of scholastic dialectics (logical reasoning); P. Ramus (1515/1572).-
- (i)b. *Science reform*: L.Vives (1492/1540 (science criticism and empirical soul science); Francis bacon of Verulam (1561/1626) (those above p. 37/41); Fr. Sanchez (methodical doubt).
- (ii)a. *Philosophy of religion J*. Bodin (1530/1596) supporter of natural religion (as distinct from 'positive' religion, which does not pass through general human reason, but through founders and prophets) and of tolerance (the state should protect all religions Judaism, Catholicism, Lutheranism, Calvinism, Islam, universalism, natural religion, but not atheism and magic); H. of Cherbury (1581/164), like Bodin, pioneer of a 'reasonable' (rational) religion, thought loose from the church and dogmata. of Cherbury (1581/1648), like Bodin, pioneer of a "reasonable" (rational) religion, thought detached from the church and dogmata, which will culminate in the Enlightenment, taking the Stoa as an example.
- (ii)b. *Metaphysics: Nicholas of Kues* (1409/1464), the first great German-speaking philosopher of modern times (Christian-scholastic, though very Platonic and mystically influenced and confronted with modern questions; e.g. *De docta ignorantia* (1440); Giordano Bruno (1548/1600), under the influence of Nik. V. Kues, pantheistic, unrestrained, and immoderate.

Bruno is above all a natural philosopher, who draws the wildest conclusions from Copernicus, whereby God and the world are both 'infinite', but each in his own way, and God is not without the world and vice versa. Like all his contemporaries, *Bruno* understood magic (*magia* is one of his books) in a 'scientific' way. Accused of heresy and magic (he would have founded the sect of the Giordanisti) he was imprisoned by the Inquisition (in 1592) and was burned alive on the *Campo dei Fiori* in Rome (1600).

(ii)c. *Mystics theosophy:* the atmosphere peculiar to this form of thought is outlined higher (pp. 26/28); -

C. Agrippa of Nettesheim (1486/1535), neo-Platonic occultist, - befriended Johannes Tritemius (of Tritheim) (1462/1516), Benedictine abbot, who practiced astrology and magic (the magic he divided into 1/ natural, 2/ kabbalistic and 3/ satanic magics) and from whom, in 1505, the monks, during his illness, burned the magic library; -

Cornelis Agrippa, under Tritheim's influence, practiced kabbalistics and magic (which prompted the Dominicans to fight him wildly), wrote *De occulte Philosophia*;

Sebastiaan Franck (1499/1542), who advocated a religion independent of all authority; Val. Weigel (1533/1588), who pushed for a pantheistic mysticism;

Jacob Böhme (1575/1624), top figure of German theosophy, yet Protestant oriented, reader of Weigel, who, in three 'revelations', recognizes that the visible things, nature, actually mountains the Holy Trinity: with the help of the Holy Spirit, who is in God and in nature, the theosophist can penetrate into the 'body' of God (which is nature); there he discovers that there is an 'ungründlicher Wille' (a groundless will, without object and without self-consciousness) and a 'fasslicher Wille' (a susceptible will, with self-consciousness and object); this is, in theosophical form, what, in more philosophical form, Hegel, Schelling, Schopenhauer will translate.

It should be noted that, in 1587,'n book appears, *History of Doctor Faust*, the scholar, who sells his soul to the devil for magical knowledge and earthly happiness: -

P. Leemans, the "Faustian" (ideology and myth), has pointed out the strong aftereffects, in Germany, of the Faust figure (1/ affect-laden, 2/ speculative-depth, 3/ realpolitical).

One should also mention Nostradamus, Michel de Notre-Dame (1503/1566), son of a notary, Jew converted to Catholicism (Provence), author of prophecies (1555), called to the court by Catherine de Médicis. All these figures are still published and read to this day, but are passed over in the ongoing history of philosophy.

(iii)a. *Natural philosophy:* see above (pp. 26/28), but now the nature-study side: a/ nature interest, b/ uncritical inductions, c/ magical-mythical view); in Italy: Cardanus, Telesius, Patrizius, Campanella, G. Bruno;

In the Low Countries: Van Helmont; in Germany: Theophrastus Paracelsus (1493/1541), strongly influenced by Tritheim, with whom he practiced alchemy (by the use of the magnet he thereby anticipated Mesmer's magnetism);

Fr. Hartmann, Aertzliche Anthropologie (Das Problem des Menschen in der Medizin der neuzeit), (Aertzliche Anthropologie (The Problem of Man in Modern Medicine)), Bremen, 1973, S. 36/41, sits out the position of Paracelsus as a physician:

a/ The Renaissance conception of man starts with S. Augustine's confessions, which, in the autobiographies of the humanists (Petrarch (1304/1374) in the lead) and in Luther's Gott-und-die-seele-Christianity, lead to the modern 'I' (as 'subject', detached from the antique and the Christian cosmos coherence); at the same time, S. Francis of Assisi (.../1226) with his unprejudiced attention to nature and its creations, detached from theology and philosophy, is the forerunner of the nature study of the Renaissance; the humanist physicians (Marsilio Ficino, his pupils Pico della Mirandola (1463/1494)) and the artists (Leonardo da Vinci's, Michelangelo) with their anatomically precise painting and sculpture put the humanities as nature study to full use;

b/ Paracelsus considers Hartmann to be the summary of all medical achievements of the time:

1/ Man is animated by the 'archeüs', i.e. a soul body that is like an 'alchemist' built into the body; if the archeüs works correctly, i.e. is accurately attuned to the astrological and the (physical, chemical and biological) nearer factors, then man is healthy; if not, he is sick; the archeüs should especially control three factors in a balanced way, which are exposed when a body is burned,

a/ the "salt" (i.e., the material remainder), **b**/ the "mercury" (the fumes that are released), and **c**/ the "sulfur" (i.e., the invisible volatile); from within, man can become ill through faults in his constitution and through soul factors; over all of this hangs God's providential guidance;

2/ pay particular attention to the following: not magic, analogy thinking, incantation, health prayers, amulets, yet

a/ all those "substances" which are present in nature and can serve as "arcana" (medicines), must be checked precisely (by chemical experimentation); thus he renewed medicine by his signature theory, basis of homeopathic medicine (later spread by Dr. Hahnemann) - see above p. 28 - and b/ by his clinical observations (he took his students to see the sick); if one compares this with the "rhetorical" medicine of the then Aristotelian physicians who took Galenos to the hospital, he is not the only one who can do so. If one compares this with the "rhetorical" medicine of the then Aristotelian physicians, who read Galenos and talked a lot without doing any research, one sees the "leap forward" in Paracelsus, who will develop further medicine, not without the influence of mathematical and experimental physics (Galilei, Bacon);

Further: D. Sennert (../1637), J. Jungius; - in France: *S.Basso*, whose *Philosophia naturalis* (1621) is atomistic, - P. Gassendi (1592/1655), who (with La Mothe Le Vayer, P. Bayle (1647/1706) to the 'libertines' (i.e., epicureans, who acted atheistically, indeed blasphemously (cf. *H. Arvon, L' athéisme*, Paris, 1967, pp, 27/29))

(Molière - cf. his Don Juan - belonged to his pupils; he said e.g. his breviary daily; but he thought he could reconcile his catholic conscience with his pagan (read: atomistic) science in his *Syntagma philosophicum*; M. Mersenne (.../1648), Descartes' friend, defending mathematical science against skepticism.

(iii)b. *Natural science*, *i.e.* mathematical physics (mathematics, geometry, typesetting) and experimentation for testing cf. above pp. 29/37;

Copernicus (1473/1543), the founder of modern heliocentrism; Tycho Brahe (1546/1601), J. Kepler (1571/1630): Kepler's laws (solar system structure) especially G. Galilei (1564/1642): exact mathematical physics (neglecting the 'secondary', i.e. non-quantitative properties of matter). Here the share of theosophy, in one form or another being minimal or reduced to zero.

- (iv)a. *Ethical political philosophy:* the theory of state and law see above pp. 42/51 with N. Machiavelli (1467/1527) with his primacy of the political before the religious and the moral ('autonomous' politics), Th. Morus (1480/1535), J bodin (+ 1596), with his concept of sovereignty, R. Bellarminus (1542/1621), on church and state, R. Hooker (1553/1600), with his Anglican canon law and natural law; Althusius (+1036) with his popular sovereignty, Th. Campanella (1638), especially Hugo Grotius (1583/ 1645), the classic.
- (iv)b. *Educational philosophy:* the account of humanism see above pp. 20/22 contains the essentials; cf. *Chr. Dawson, Crisis of Western Education*, Tielt/The Hague, 1963, pp. 37/52 (the age of humanism), 53/69 (the influence of natural science and technology); one note: "As to the educational part, the shortest rule may be: 'Consult the schools of the Jesuits,' for nothing better has ever been put into practice." Thus *Bacon, De argumentis scientiarum*, 6:4. This until the fall of the Jesuits in the XVIIth century.

General Decision.

- Cf. P. L. Landsberg, Die Welt des Mittelalters und wir, (The world of the Middle Ages and us), Bonn, 1925, S. 94, "in the Renaissance the Middle Ages go back to its antique sources, especially to Platon, and thereby become once more more lively and cheerful, in the full sense of the word 'more Catholic.' He sees in the Renaissance "the Middle Ages refreshed after its sources (S. 97).
- O. Willmann, Gesch.d.Id, III, S. 1/207, speaks of the idealism of the Renaissance: which points to the Platonic and Neoplatonic, yes, the Pythagorean dominant. If one pays attention to the notion of 'analysis' (p. 30; 38/39) explained by us, then even modern natural science is 'idealistic', though different from before.

To see in the humanists the Greek Sophists (*J. Blackham, Humanism*, 1968, p. 112), is certainly to assume with reservation. - One could perhaps speak of "pluralistic Middle Ages.

(D) Modern philosophy.

The XVIIth and XVIIIth centuries form a whole, which is sometimes called the 'modern period'. Modern" (hodiernus, from +/- 500 modernus, current, contemporary, topical) has often been used, since +/- 900, in ecclesiastical circles, either melioratively (open, liberal, aware of the latest facts or ideas, enterprising) or pejoratively (fashionable, frivolous, actualistic (i.e., moving in accordance with current trends), neologically (i.e., eager for the new for the sake of the new, with no understanding of tradition).

As a technical term, 'modern' stands in opposition to 'medieval (yes, 'renaissance') and 'contemporary'. With don't confuse it with 'modernist'

a/ which is used literary historically to denote literature from +/- 1910 onwards (after symbolism) and

b/ that theologically-religious-philosophically designates the religious liberalism (or liberalism) that emerged +/- 1900, especially but not only in Catholic circles (with A. Loisy as the main figure, among others)).

"The Renaissance itself, to its own glorification, invented the later generally accepted trinity: 'Antiquity/ Middle Ages/New Age,' with the Middle Ages lying like a shaded valley between the luminous heights."

Th. Geiger, The Creative Vanguard, Rotterdam/ Antwerp 1970, p. 67). Disagrees:

a/ Veblen, he says, relies on factual knowledge as a cultural feature;

b/ himself, on etatism (i.e., the fact that the territorial-national state becomes the prevailing social form of life) well, that is not in the Rinascimento. "If rationalism (i.e., the inclination to introduce a rational world view and a rational ordering of all conditions of life) and the state as a political form of existence are the bearing features of the new era, then their sun rises not with the Renaissance, but with the Baroque" (o.c., 68).

'Baroque' is a term of art and literature, designating the 'barrueco' (Spanish for irregularly shaped pearl), i.e. feral voracious art and literature of the XVIIth century, the time of absolutism and counter-reformation, especially in Spain, France and Italy, less so in Germany (Protestantism and bourgeoisie prevented the Baroque).

- H.J. Blackham, Humanism, 1968, pp. 116/121, divides "rational time" into two phases:
- (i) The Age of Virtuosi: Newton (1642/1727), the preeminent man of the mathematical physical, is authoritative and, in the place of the umanista, the humanist of the Rinascimento, now come the virtuosi of the XVIIth century, "by which were meant 'those who understand and practice 'experimental philosophy' (we would now say 'positive science') (R. Boyle (1627/1691))" (o.c., 117);
- (ii) the time of the 'philosophes': in the line of the virtuosi, the 'philosophers' of the XVIIIth century (Enlightenment, Aufklärung, Lumières, Enlightenment) think differently, doubtfully, testing, investigating, while 'ideas' (conceptions) are

formulates to gradually expose the "system of nature" (in which man is "a part"), without, however, wanting to emulate the heavy, "baroque" subsystems of virtuosi.

Since we have already outlined above (pp. 42/51) the modern state as a cultural factor, we now turn to the second factor of the "modern" age, rationalism.

The concept of "rationalism". - The word is used in (almost hopelessly) many meanings, which, however, illuminate each other and bring us home in modern thinking.

'Ratio'(nalis)' is a Latin word, derived from reri,

a/ counting and arithmetic respectively and,

b/ by extension, thinking. We translate by "reason," which, however, has two basic meanings in Dutch:

- (i) thinking "reason" (and this is what we are primarily concerned with here);
- (ii) language speech (so e.g. in speech: lateral and direct 'speech', i.e. verbal representation of another's or one's own opinion). This brings our word 'reason' much closer to the Greek 'logos', which means and thinking and speaking.

"Reason (logos) is a speech that pronounces the reason, i.e. the relation, the relationship or the proportion, which connects the constituents of the thing under discussion, a speech that thus designates the 'reason' by which the thing under discussion exists" (A. Wylleman, The basis of morality, in Tijdschr. voor fil; jr. 28 (1966): 4 (Dec.), p. 627).

Wylleman puts the emphasis on what we, in real Dutch, by analogy with the word 'proportionate', could call the 'redige' aspect of 'rational', i.e. the network of relations which both reality and conceptions (words) exhibit in analysis. Wylleman then distinguishes two aspects: "Reason is (...) the capacity, through such speaking, to make things intelligible and understand them. Reason (...). - the proportion which binds the constituents - is that by which something exists, that by which it resists perishing, that by which it persists and remains. The world exists because it forms an ordered, harmonious whole or cosmos, a set of things whose ordering proportion makes them not disintegrate into chaos." (a.c., 627).

One does grasp that 'existence' is used here in the sense of 'existing' (I have survived existence, i.e. 'a threat e.g.), 'being able to withstand', resistance.

Immediately the antique conception of 'cosmos', which has dominated Western thought since Pythagoras (until the crisis of Galilean mathematical physics, according to A. Koyré), is at work here. Wylleman then explains that not only 'constitutively' speaking, i.e. with a view to the specific nature of the total reality, but also 'deontically' (duty-sensitive) or normatively (rule-sensitive) the 'reason' (element-relationship) is involved:

"In a similar way, a community or an individual exists: they maintain or acquire an existence that makes them resistant to decay, to the extent that they manage to unify the multiplicity that is in them, according to a suitable proportion. Therefore, the establishment of true standards of life is nothing but the indication of rationality, i.e., the reasonable order, which will assure to the life of the community and individuals a fixed existence." (a.c.,; 627).

Summary:

'rationalism' is a form of thought that

- (i) informatively (i.e., logically and epistemologically) puts reason (as language, thought, and relations thinking utterance) at the center;
- (ii) constitutively (a/ ontological and b/ mainly physical) a/ conceives of reality ('being') and b/ very particularly of nature as thoroughly 'rationally' structured or at least amenable to rational interpretation,
- (iii) deontically (i.e., normatively, behaviorally regulative) considers the action as reasoned ("rational") justification;
- (iv) to which comes a fourth point of view, the preconstitutive (i.e., that which takes into account the "origin" of a/ reality and b/ nature, usually the deity): the total origin of things lying before the given reality and nature is thoroughly "rational" (reasonable).

Conclusion: the four dimensions of all philosophizing are "rational. Cf. Fr. Wiplinger, Warum das warum (Die ursprüngliche Frage und der Ursprung der Vernunft, (The original question and the origin of reason,), in Wort u. Wahrheit, XVII (1962): 5, S; 335/336 (the fact that man (asks himself) questions is sign of 'reason'); G. del Vecchio, Droit et économie, (Law and economics,), in Bulletin Européen, 1962, ja. Fé., pp. 10/12 (any act, theoretical or practical, of man is 'economic', i.e. it reasons the minimum causes with its maximum consequences (results), an application of the economy principle of Peter Aureolus (+ 1322) at work in all rational behavior).

Essentialism. - Conceptualism is peculiar to rationalism: the concept as a representation of one or more objects such that the common or general is suggested, comes

a/ implicit in sensory experience through,

b/ becomes through "reason" (ratio), which is the discursive side of the conceptualization process,

c/ passed to the mind (nous, intellectus) which 'abstracts', i.e. universalizes what in sensory experience was only individual or private.

Since, according to rationalism, only the universal is the essential or essential (substantial), a philosophy of understanding is therefore an essentialism or essence belief.

Intersubjectivity. - The universal in the objects is reflected in the universal in the subjects: in every human being, notwithstanding his individuality, a/reason, b/reason (and c/ the sense as one with reason and reason) is identical: always and everywhere the same insight, at least at a minimum-essential effort, becomes apparent by all.

History of rationalism.

The archaic mentality was once branded by Lévy-Bruhl (1857/1939), at least in its first phase, as "prelogical" (because of its magic, which proceeded, so to speak, illogically). Since Cl. Lévi-Strauss (1908/2009), the structuralist, it has been made clear that archaic man also thinks logically, and does so in 'systems' subject to rules, which, as a whole, are themselves ordered by rules. 'Structures', including archaic ones, are 'rational' and thus an archaic rationalism is establishable.

Yet strict rationalism did not break through until Greek philosophy:

a/ there rationalism is either rhetorical (with protosophistics and deuterosophistics e.g., with Isocrates) or philosophical (Socrates, Plato, Aristotle take a stand against the not more rigorously logically justifiable, rather utilitarian speaking and thinking of (proto)sophistry).

b/ Immediately some philosophers (the great Socraticists, the Neo-Platonists e.g.) are intellectualistic (they take the nous or intellectus (mind) as intuitive grasping of the essence in the universal understanding, which in reason (ratio, discursive side of knowing) is set forth and articulated); the others (stoa, epicureans) are 'rationalistic' (here in the limited sense: they do not take reason, but only sense and reason as discursus, as exposition of what the senses offer).

c/ Furthermore, there are dogmatists (great Socraticists, religious materialists (stoa, Epicureans), neo-Platonists) who accept intersubjectively valid and communicable universal realities and concepts) and skeptics, who think more individualistically and also act more empirically (accepting only the senses, without reason or reason).

d/ The 'classical', secularising rationalists are (rather) dismissive of magic and mysticism; the theosophical (hermetic, neo-Pythagorean, Gnostic, Neo-Platonic) philosophies, on the other hand, assume that, besides reason (with or without intuitive reason), belief in revelation which comes through the paranormal is also reasonable or rationally justified and are therefore branded by the 'classical' rationalists as 'syncretists' (mixers of rational and irrational).

Patristics and scholastics, but with different emphases, continue to think in the antique line: rhetorical or philosophical rationalism, whether or not conceived theosophically-syncretically, remains characteristic.

According to C.S. Peirce, scholasticism is e.g.

a/ well so that the testimony of the great thinkers and, above all, of the Church Magisterium is decisive and that basic truths are never methodically doubted (which is not true of Gregory of Nussa or Augustine of Tagaste, incidentally),

b/ yet, on the other hand, knows its multifaceted relational approach (arguing from reason, from faith) and seeks to explain truths of faith, notwithstanding their mysterious nature, rationally.

Modern rationalism.

The starting point is the fact of the independent citizen.

- (1) The word 'Burger' comes from 'burg', i.e. a fortified, secure place of residence, in which the inhabitants and neighbors found refuge in difficult living conditions. This can still be seen in the medieval names that end in 'burg' (Middelburg, Domburg, etc.). Above all, one should not confuse 'burg' with 'fortress', which houses the nobility.
- (2) The merchants were often not far from the burg: they piled up a merchandise in a trading settlement there. The merchant class, surrounded, if necessary, that settlement with a rampart or wall.
- (3) Immediately grew in their souls the will to regulate their own affairs and to be independent of the nobility (the lord whose protection they originally enjoyed). Security, insurance, such was the 'soul' of the bourgeois:
- (i) opposite the 'outside', the city of the citizen-man is a place of law (charters, labels) that guarantee order, orders that 'outside' with its insecurity does not know or does not know enough;
- (ii) opposite the fortress, where the whole creates security while at the same time making 'serfs' or 'serfs', the bourgeois wants to determine his 'right' himself and create his laws; instead of the 'glorious' arbitrariness of the aristocracy, the bourgeois wants a state of law that protects against theft, robbery and rape.
 - (4) This creates the third position:
 - a/ The lord is empowered by the knighthood wielding the sword;
 - **b**/ the clergy is powerful through the sacred authority of religion;
- c/ the citizen it is by his reasonable and intellectual industriousness, by his self-confident, freedom-loving allure, and his orderly approach to living together.
- **d**/ In that late medieval city of the bourgeois, a new thinking emerges, not aristocratic, not clerical or not monarchical, but urban- industrious. That thinking wants to make the earth habitable so that it is safe and secure thanks to rational action; yes, sustainable progress wants that increasingly enterprising thinking. Calculating and calculating insurance are very characteristic: rationality and safety or security go together; hence, among other things, the sense of causality: life is a chain of causes and effects, which one prefers to calculate and of which one assures the outcome. If not, one no longer controls life and insecurity sets in.
 - a/ Fear of uncertainty typifies the civilian man.
 - b/ Calculated and calculating behavior as an incantation of that fear follows.

Consequence, as, E. Jünger, Der Arbeiter (Herrschaft und Gestalt, (The Worker (Rule and Figure,), Hamburg, 1932, the citizen is the walled man: a/ the uncanny of magic and religion, which makes its extra- and supernatural powers and figures and rites, does not appeal to him; b/ the uncanny of the 'elementare' (i.e., attached to the wildness of the natural elements) phenomena, 'outside' the city (or its safety), appeals to him even less. The great instrument with which he creates a safe home for himself on this earth is his reason and intellect. So much for the general climate.

M. Foucault, Les mots et les choses, (Words and things,), Paris, 1966, pp. 64/72, explains how, at the beginning of the XVIIth century, the typical Renaissance natural philosophical and mystical-theosophical thinking (Paracelsus and others; cf. above pp. 25/28, 57/59) based on parables which are still interpreted magically-mystically, recedes: the way of Bacon (cf. above pp. 37/40: the first ideology criticism from an empirical perspective (the idol-criticism)) and of Galilei (cf. above 28/37: the mathematical physical with

a/ its mechanics.

- **b**/ its mathematization of the empirical data) are entered, the path of experimental natural science, that is, and
- (i) medical (physiological) mechanism (which conceives of the living body as a device (machine)) and
 - (ii) imply astronomical-physical and mathematicalization of empirical facts.

This has been called modern rationalism, this mechanization and mathematization, extended if necessary to fields beyond the medical-physiological or astronomical-physical sciences.

Cf. M. Ambacher, Les philosophes de la nature, (The philosophers of nature,), Paris, 1974, pp. 46/57; even pp. 57/68 (biological object study, artificialist rather than vitalist) and pp. 68/78 (positivism). Cf. also G. Buis, Science et idéologie, in M. Amiot et al, Les idéologies dans le monde actuel, (Ideologies in the current world), DDB, 1971, pp. 33/47: "(...).

While, in the XVIIth and XVIIIth centuries, astronomy and physics, both mathematically conceived, were being created, a scientific ideology, the dream of a nature that can be completely measured, appeared through a god who is a mathematician, geometric and mechanical for Descartes, calculable for Leibniz. If ideology thus rises from its scientific ashes and is reborn, this proves that the 'ideological function' (i.e., the role ideology plays) has not been destroyed by the rise of scientific thought, but that both, ideology and science exist together." (o.c., 37).

- M. Foucault, ibid, pp. 70ss. points out that this rationalism represents only a part: there is a third modern rationalism which does not want to take mechanization and not mathemization but the mathesis universalis, the universal matesis, as its model of thought: it also compares the phenomena still to (i) measure them and (ii) order them.
- a/ Measurement relies on 'elements' which are units and which serve to 'analyze' a data through arithmetic numbers (the identical, the unit of measurement serves to indicate the differences).
- **b**/ *Ordering* is the equation which builds up a series (ordering a, b is not looking at a and b separately but establishing the series a, b as an order). Both 'analyses' (measurement analysis, order analysis) lead to series formation (gradations), according to Foucault. This series formation is higher degree ordering, of which **a**/ measurement and **b**/ ordinary ordering are only two applications.

Mathesis universalis in this sense says Foucault, o.c., pp. 66ss., is Descartes' proposal (about whom further): 'true knowledge', according to Descartes, arises:

- (i) intuitive (the intuition of our mind that beholds the basic ideas),
- (ii) deductively (starting from the basic intuitions our mind deduces the other truths, (think of Eucleides' axiomatically deduced geometry) and
 - (iii) comparative: there are two types of comparisons, viz.

a/ the equation which is measurement (one analyzes - always that platonic word - e.g. the weight of gravity, the 'measuring' by virtue of unity of 'force' e.g.) and

b/ the comparison which is 'ordering' (one analyzes the pair 'a, b' and finds that it implies an order: a comes before b). Similarity and difference at the same time are exposed in such an ordering (= comparative) analysis.

It should be noted, in the spirit of O. Willmann, speaking of the lemmatic-analytic (in short: analytic) method (see above p. 30; see also *O. Willmann, Abriss der Philosophie (Philosophische Propädeutik)*, (Outline of Philosophy (Philosophical Propadeutics),), Wien, 1959-5 (preface by Max Müller), S. 137) that every analysis starts from the premise that any object lends itself to analysis, here to comparison (that is the lemma and in the broad sense; in the narrow sense analysis always presupposes a plural, i.e. 'a collection with elements and common properties, - antique-medieval said: a unity in a multiplicity); i.e. that every object of comparison is rationally structurable.

Conclusion: there is, from Galilei and Descartes,

- (a) 'a mechanistic rationalism in medicine and physiology) and
- **(b)** a mathematical rationalism (in physics and astronomy), then here Descartes is assuming,
- (c) a comparative rationalism at work (as a new episteme or "savoir," as Foucault likes to say).

The Mathesis universalis, i.e., 'comme science générale de l' ordre' (as a general science of order) (o.c., 171): who does not think here of *J. Royce, The Principles of Logic*, New York, 1961, p.11: "Logic is the general Science of Order, the Theory of the forms of any Orderly realm of Objects, real or ideal" (Logic is the general science of order, the theory of the forms of any orderly realm of objects, actual contemplative substantive).

The difference both with Willmann and with Foucault lies in the fact that Royce a/idealistic as he is,

b/ is at the same time Peircian, thus more philosophical than Foucault and more pragmati(cisti)scher than Foucault and Willmann. The introduction of signs (semiotic aspect) to compare (= order) corresponds, in fact, to the 'sign character' (rational character) of things themselves and this sign realism is the sanction of the sign system (here comparative system) applied to reality: the result, once the analysis has been worked out, decides on its truth. Foucault hardly ever mentions this result: this is the gap in his study of rationalism, however solid it is and remains.

Said in passing: a simple little book that introduces us directly to Cartesian universal matesis or order science is Van Praag, Measuring and Comparing, Hilversum, 1968; more difficult and German metaphysical is Fr. Schmidt, Ordnungslehre, Munich/Basel, 1956 (especially worthwhile is the history of an order doctrine (o.c., 11/17)). Finally: G. Jacoby, Die Ansprüche der Logistiker auf die Logik und ihre Geschichtschreibung, (The claims of logisticians on logic and its historiography), Stuttgart, 1962, S. 98/105 (Zu der Frügeschichte der Logistik), (On the early history of logistics).

Note three approaches to an order or comparative science:

- (i) the mathematization of the sciences (especially since Galenos (+129/+199),
- (ii) the grammatica speculativa (the connection between logic and linguistics (terminism (see above p. 15)),
 - (iii) Ramon Lull (1233/1315) with his ars Magna (Great Craftsmanship) walk out
- a/ on the matesis universalis, Descartes' design (with influence from Vieta, Galilei, Mersenne).
- **b**/ on characteristica universalis, Leibniz's design (algebraic combinatorics, part of general letter science) and the design of many others,
- c/ on the mechanization of the account (calculating machines are designed, as well as thinking machines) and,
- **d**/ however unexpectedly, on the occultist intended universal order science (especially kabbalistically based), among mystics, Rosicrucians, astrologers, alchemists,
- By J. Böhme, Ath. Kirscher (= the Jesuit), Tritheim (cryptographia, which was to penetrate the magical-mystical being of things and processes),
- with Leibniz (who, at least for a time, pursued occult elaboration, this until his death). "After all this, concludes Jacoby, was, in the XVIIth century the characteristica universalis (literalism very widely thought thus) strongly spread". (o.c., 103).
- M. Foucault, o.c., pp. 92/225, then shows in detail how this comparative analysis is at work in
 - 1/ the general grammar, in
 - 2/ natural history (the precursor to the biology of today) and in
- 3/ Wealth analysis (the forerunner of our economy). To speak is to give names, to study living beings is to classify them, to own resources is to exchange them. Languages, living beings and resources are located in an order (and are comparable according to their elements and collections):
- 1/ Each individual being is provided with a name and can therefore be included in an ordered language system;
- 2/ Every natural being is amenable to characterization and can therefore be placed in a taxinomy (ordering system);
- 3/ Any wealth is convertible into currency and can therefore be put into circulation (o.c., 187).

This, because every representation in human analytical consciousness can be provided with a sign and is therefore knowable in the sense that it can be incorporated into a system of similarities and differences (ibidem). Thus three new sciences emerged in comparative rational style.

Rational innatism and empiricism.

E. Cassirer, Die Philosophie der Aufklärung, (The Philosophy of Enlightenment,), 1932, emphasizes the unity that exists between the empirical rationalism of the English and French empiricists of the enlightenment, on the one hand, and the systematic rationalism of the (mainly continental) innatists, on the other.

Indeed, listen to *J. Locke*, the founder of enlightenment, in his seminal work *An Essay concerning Human Understanding* (1690), IV: 19.4:

"Reason is natural revelation, through which the Father of all light, the eternal source of all knowledge, communicates to them that portion of truth which he has placed at the disposal of the natural faculties of men. And revelation is natural reason, augmented by a new treasure of discoveries, which spring immediately from God and whose truth reason substantiates by means of the testimony and evidence it uses to show that they really come from God. Consequently, he who writes off reason to make room for revelation simultaneously extinguishes these two lights."

Immediately afterwards, Locke resolutely opposed the "enthusiasts", i.e. those who claim to receive an immediate revelation from God (instead of the indirect one from the prophets, for example). In the meantime, one sees what a fundamental place reason occupies with empiricism, both in profane and religious matters. So that with good reason empiricism can be called a rationalism.

On the other hand, e.g. *H.J. Robinson, Renascent Rationalism*, Toronto, 1975, p. ix: "The rationalist tradition of philosophy is best represented by Platon, Descartes, Spinoza and Leibniz. It was interrupted in the XVIIth century by Hume and Kant, who maintained that it is impossible to have any knowledge of things that cannot be perceived.

The rationalists once proceeded to speculate (contemplate) such things, and Hume in Britain and Kant on the continent were widely believed when they claimed that such contemplation was void. Examples of such things, two hundred years ago, were God and the human soul.

Recent examples are Freud's reflections on Ich, Ueber-Ich, Es and libido, - concepts condemned by behaviorist psychologists on the grounds of their imperceptibility."

One sees that some empiricists go far in their empiricism, which they conceive to be exclusive, - further than e.g. Locke, who opened the way to it.

a/ For Descartes, irrationalist is anyone who has beliefs that are not deducible from clear, distinct representations.

b/ The empiricist, on the other hand, entitles as he rationalist who works with concepts and insights, which are not deducible from sense perception and maintains with greater insistence assertions than those to which sense perception empowers him." (*W. Bartley, Flucht ins Engagement*, Munich, 1962, S. 120). Both, however, Bartley considers rationales.

The subjectivization of the concept of idea.

T. Richard, Introduction à l'étude et à l'enseignement de la scolastique, (Introduction to the study and teaching of Scholasticism), Paris, 1908-2 p. 263, says: "All the contradictions and all the disagreements (...) between the different philosophical systems are too long to be connected with the question of the origin and value of our ideas." And O. Willmann, Gesch. d. Id., III, 208, typifies modern rationalism with the expression "subjectivization of the concept of 'idea'". We explain this thoroughly.

First, other antique-medieval terms are also transformed:

(i) forma, form (central concept in Aristotelianism),

a/ which for the scholastics meant 'being' ('to look at something formal' means to look at something according to its essence) and which still lives on today in expressions such as 'state form', 'art form', etc.

b/ impoverished to 'figure', external structure: this is why we contrast it with content or substance and why 'to look at something formally' means as much as 'to look at something externally'; in other words, as 'idea' is subjectivized, so 'form' is externalized;

(ii) so does the concept of substance:

a/ in scholasticism, "substance" was something that exists in such a way that in order to exist, it needs nothing else, as a subject to which it is inherent, but itself,

b/ for Descartes e.g. 'substance' is simply something that, in order to exist, needs nothing else (the scholastics also knew something like this, i.e. God). These two examples support the fact that the language of the subjects shifted profoundly in the XVIIth century. Why? Modern rationalism,

a/ empirical or innatist,

b/ mechanical, mathematical or comparative, - abandons antique-medieval idealism or realism to become "idealism" in the modern sense of the word. "Idealism (understand: in the modern rationalist sense of that word) is a philosophical doctrine which consists in reducing all existence to thought." (In other words, anything that exists outside of thought and thought, independent of it, is an unthinkable thing).

Reason: thought, immediately spoken, reaches only itself and its immanent content". Thus *R. Jolivet, Les sources de l'idéalisme*, (The sources of the idealism,), Paris, 1936, p. 7.

One feels: 'thinking', 'thought' mean something new here. *Descartes (Meditatio II)* says that 'cogitare', 'thinking' means: to doubt, to see, to affirm and deny, to want and refuse, to imagine, to perceive. In other words, the whole conscious inner life is indicated by it.

Cf. E. Grassi, Descartes und das moderne denken, in K. Vorländer, Philosophie der Neuzeit (Descartest, Hobbes, Spinoza, Leibniz), Hamburg, 1966,S. 229.

Also *M. Foucault, Les mots et les choses*, 1966, p. 58, says that "language is nothing but a special case of representation ('représentation')" (making 'analysis' into 'analyse de la représentation'). Indeed, one has spoken of 'representationism' (thought of representation).

It should be noted what *R. Eucken, Die Lebensanschauungen der groszen Denker*, (The views of life of the great thinkers,), 1890, S. 381, says in reference to Descartes' 'thinking': "It remains insufficiently elucidated whether thinking (...) is a collective process peculiar to all singular beings or whether it is merely an expression of life of the object, an illumination of the self, - i.e. whether thinking has man or has man thinking (as a property). According to one or the other explanation, strongly separated movements arise (...)". This fluidity persists e.g. to our days in structuralism which speaks of the disqualification from its carrier function of the subject 'man' and insinuates that language is one in each of us (intertextuality).

Of course there are variants: *I. Kant, Kritik der reinen Vernunft* (Critique of Pure Reason), (Transc. Analyt., II: 2, 3) distinguishes, e.g., between the "problematic" idealism of Descartes (who, beyond his own consciousness ("thinking"), is or is not clearly distinguished from that of other men and minds who also think, yes, beyond that thinking,

a/ both God and his veracity and

b/ accepts extended matter, - and is thus a non-rough idealist), on the one hand, and, on the other, the "dogmatic" idealism of Berkeley (who **a**/ does accept God above his thinking, **b**/ yet does not accept material things outside his thinking except as "bare representations" of our own thinking that God produces in us).

In other words, one can, always in the modern sense, be an idealist to a lesser or greater degree: because Berkeley accepts a God outside and above his thinking, he too is not yet fully an extreme idealist. One would rather find this with Spinoza who knows only one 'substance', one self-existent being, God: this God is thought and extended substance; thought and extended substance are also mutually identical as two 'several' sides of the one God.

Meanwhile, the Cartesian revolution (dixit *E. Bréhier, Hist. d. l. Philosophie*, Paris, 1926-1) exists precisely in that he provided the basic formula of modern conceived idealism:

"If we claim that something is locked up in the nature (natura) or concept (conceptus) of a thing, that is the same as if we were to claim that something is true of that thing (self) or that that something can be said to be true of the thing itself."

But, note, this Cartesian statement should be understood as Bréhier explains it: "La philosophie moderne ne s' était fondée, avec Descartes, qu' en faisant de l' idee l' objet immédiat de la connaissance". (Modern philosophy was founded, with Descartes, only by making the idea the immediate object of knowledge),

In other words, if we "think" (are consciously engaged in some way), we do not reach the real world in or around us, through only the "representations" in our thinking.

a/ Those representations, of course, do refer somewhere to the real things in and around us,

b/ but direct substantive contact we do not have with it.

Conclusion: Conscientialism (from conscientia, consciousness, awareness, conscience) is the philosophy that conceives of the reality there things only as existing in consciousness, presenting consciousness as an interiority and a closed space (introspective), so that things are said to exist only immanently to our consciousness, in our (consciousness) immanence, intramental (not extramental).

Modern philosophy goes the (consciousness) immanentist way and can thus be called an immanent philosophy:

"The Cartesian revolution in philosophy is thus indeed a revolution (...). We shall label them, in a word, as the rise of immanence philosophy. By this we mean that the essential doctrinal principle is that the only universe accessible to knowledge is that which is immanent to the knowing subject. This principle is going to dominate the whole of the following philosophy, and, presupposed as it is as an evident and irrefutable axiom, it will, for three centuries, guide the whole speculative (=reflective) movement." (*R. Jolivet, Les sources de l'idéalisme*, Paris, 1936,p. 772).

As a theory of perception, this conscientialist or immanentist philosophy becomes "a mediatism.

- (i) 'mediaism' means that we do not perceive the so-called external (material) object, but an intermediate term (which is a representation, hence representationism);
- (ii) immediatism means that we have a direct, immediate perception of the object (one sometimes speaks of 'intuitionism', where 'intuition' or contemplation means direct feeling of a perceptual and cognitive nature with something).

Now there are types of mediathisms:

(a) *objective mediatisms* such as that of Descartes: e.g. light, reflected by a vehicle, strikes my eyes and causes a change in them, which works through to the brain; this change activates the 'animal spirits' (esprits animaux) in the nerves, which generate an impression in the organs and their movement; as a result: I evade that vehicle;

Conclusion: as a result of the organ movements caused by the animal spirits we decide on the existence of an external world and develop an understanding of it within ourselves; other mediatisms are those of Leibniz and Malebranche; - among the empiricists J. Locke is objective mediatism: we possess in us representative (= referring) 'ideas' (representations, which are the 'images' of the objects) in our consciousness; by means of 'inference' (inference, - not intuitive) we decide on the objects outside us;

(b) *subjective mediator* is Berkeley: the phenomenon, which is conscious in us, is only the modification of the subject himself who perceives (esse est percipi: the material objects are pure representations of our inner consciousness); fortunately, our representations in us are orderly caused by God.

Survey of the systematic - rational philosophy of the 'virtuosi' (XVIIth century). The goal.

The constructive philosophers of the baroque period are first of all epistemologists: they build on a knowledge-theoretical foundation of the 'system'; they start from autonomous reason (tradition- and authority-free way of thinking); further, they are (meta)-physicists: they work out a theory of the general mechanical coherence of 'nature' (which is conceived here in a very material way) - hence the name 'mechanism';

They also want a theory of the relation between (material) nature and "thinking" (the mind); they are all more or less (natural) theologians: they give belief in God a place in their system; they are all working on an ethical-political theory based on their metaphysics, which looks modern, if one compares it with the scholastic one.

Note.-- On mechanism

Is "mechanical.

- (i) that which is similar to or related to appliances, machines (a mechanical organ e.g.);
- (ii) that which proceeds solely as movement (without force or energy, without purpose, without life principle or soul);
- (iii) unconsciously (a mechanical defense movement in man, which proceeds without deliberation). Mechanism' is the theory which explains, either in whole or in part, the nature of reality in its process (course) on the basis of purely mechanical movement of the constitutive elements (atoms e.g.) of matter: this is what Descartes does more than Leibniz, who thinks dynamically. He starts from an inner energy of the substance).

Dynamism (energy as an explanation of phenomena), **finalism** (= theology: purposefulness as an explanation), **vitalism** (life principle as an explanation of life phenomena), - they all presuppose more than mere machine or mechanical motion.

(I) René Descartes (1596/1650).

G.G. Granger, Rational Thinking, Meppel, 1971 (Fr. 1955-1, 1967²), p. 15, sees in Descartes the symbol of the conflict between the authoritarianism of scholasticism and emancipated scientific thought. Indeed, this aristocratic Jesuit pupil spent most of his life in the foreign country out of fear of the Inquisition and the like. Cartesius (his Latinized name) is a multifaceted mind:

(i) He is, before anything else, "le grand purificateur" (Pascal):

a/ Of the four causes of Aristotle and Thomas (material, formal, working (efficient) and final causation), he retains one, the efficient (working) cause which he merges with the form or formal cause:

b/ Of the many types of change, he keeps one, the local movement;

c/ of the many kinds (gauges) of souls (vegetable, animal, fairly new of life) he keeps one (*J. Wahl, Tableau de la philosophie Française*, Paris, 1962, p. 10);

In other words, since Descartes and Locke, modern "criticism" emerged, i.e., the attitude whereby one tests cultural phenomena for their value (know value, other values); "critical" has become a catchword: cf. *R. Kwant, Critique* (*Its Nature and Function*), Paris, Louvain, 1969, reflects on its meaning;

a/ criticism has always been there, of course, from the archaic phase to scholasticism:

b/ the criticism deployed by Descartes and Locke is dependent on their system (and in this sense as relative as all criticism); e.g. the criticism of the theory of causes, the theory of motion, and the theory of souls of scholasticism is but the negative side of the rationalist position;

It should be noted that, in contrast to J. Wahl (and Pascal), *R. Böhm, Critique of the Foundations of Time*, Baarn, 1977, p. 101vv., claims that Descartes and Locke are traditional: with modern philosophy comes insight:

1/ in the actual conditions

2/ Of the realization of Aristotle's ideal,

a/ namely, a purely "theoretical" knowing, an "objective" knowing, pursued purely for its own sake, which culminates in experimental, indeed, technical and applied knowing;

b/ Above all, the antique motifs (godliness, freedom, immortality, attainable by that objective knowing) are omitted and are replaced by the idea of a dominion of man over nature in unlimited progress;

Something more or less reminiscent of *M. Heidegger, Holzwege*, Frankf. A.M., 1950, S. 69/104 (*Die Zeit des Weltbildes*): 1/ science, 2/ machine technology, 3/ art as aesthetic experience, 4/ human beneficence as 'culture' and 5/ 'degoding' (undecidability concerning God and gods) characterizes the modern age: especially that science becomes technology and technocracy is due to the fact that the (modern) metaphysics

1/ conceive of being as objectively proposed calculability and

2/ Truth reduced to the certainty of "representation" - something that neither antiquity nor the Middle Ages knew; so much for a word about Descartes' relationship to the past;

(ii) Now the positive characteristic of his system:

Three aspects can be exposed:

a/ Descartes before all else mathematician:

continuator of Fr. Viète (Vieta) he is comparable to Galilei, Pascal, Newton; analytic geometry is in his domain as *J.P. Sartre, Situations*, I (*La liberté cartesienne*) says, Descartes, in his youth, went through the experience of the rational compulsion which mathematical truths impose on the thinking mind; his philosophy is the rational form of a privileged existential experience (of a mathematical nature here): it is **a**/ a geometrician, **b**/ an algebra practitioner, indeed, **c**/ a matesis universalis practitioner, who designs a metaphysics; hence his intention to elaborate the philosophy more geometrico axiomatically;

Consequence:

a/ not the rhetorical modes of thought (cf., Bilthoven, 1975,p. 77/99 : "with (FR. Bacon and R. Descartes) one finds a pronounced hostility to rhetoric"),

b/ also not the scholastic method,

c/ also not yet the antimathematical-empirical method of Bacon,

d/ but the deductive method of euclidean and analytic geometry is the model for philosophical thinking (which opens the way of the great "systems" of the Baroque);

b/Descartes is at the same time the inventor of the so-called reflexive method: (74/81)

Through inner observation, introspectively, thought comes to its full development; philosophy starts from the cogito, I think (as specified above: idealistically), i.e. from consciousness immanence (cf. *P. Ricoeur, Le conflit des interprétations*, Paris, 1969, pp. 169ss:

"This wide-ranging tradition of modern philosophy which starts from Descartes, develops with Kant and with Fichte and the continental current of reflexive philosophy", - o.c., p. 322);

As Ricoeur, taking into account the psychoanalysis of S. Freud (1856/1939), the influence of the unconscious on the conscious (and the 'thinking' so central to Descartes) is such that conscientialism enters into crisis as soon as thinking realizes that it is undergoing unconscious influences: the whole 'autonomy' of the reflexive method is in question and it can only be a partial method for an overall philosophical approach to total experience; we thus encounter here a nevralgic weakness of idealistic rationalism;

H.J. De Vleeschauwer, René Descartes (Life's journey and world view), Antw./ Bruss./ Nijm./ Utr., 1937, pp. 44/60; talks about an "illumination" (enlightenment experience) that Descartes had:

"Seized with enthusiasm and enraptured by his discovery, the Descartes dreams up to three times in one night." (o.c., 45). Descartes stood, around November 1619, before the massive block of scholastics and Aristotle's philosophy:

"To reconstruct this one bloc by means of a method as yet untried but unsophisticated on the pattern of mathematical evidentiallity and mathematical analysis: this was indeed the vocation to which he felt predestined on the tenth of November 1619." (o.c., 48). "It cannot be disputed that Descartes had the decisive illumination in these days." (o.c., 45).

What should be noted here is the contradiction between Descartes' conscientialism and his dream experience, which brought him into direct and introspective contact with his unconscious and subconscious "soul" which he rejected): how can one

a/build an idealistic (understand: conscientious) reflexive philosophy

b/ without processing the intrusion of e.g. such an emotional dream experience into the fortress of conscious thought?

Meanwhile, there is clarity: the man who has been labelled the 'first theoretician of the mathematical physical' (*E. Denisoff, Descartes, Premier théoreticien de la physique mathématique*, Louvain, Paris, 1970) had 'irrational' aspects and experiences, which others have also had (cf. *E. Schering, Die innere Schaukraft (Träume, Erscheinungen des Zweiten Gesichts und Visionen des Johannes Falk*) (The inner vision (dreams, apparitions of the Second Face and visions of John Falk)), München, Basel, 1953, - Falk (1768/1826) friend of Goethe, received his vocation, the education of neglected youth, in a dream; Schering does not start from Freud's dream analysis, but from eidetics (what the English call 'second sight')).

In another way: *S. Hutin, Les sociétés secrètes*, Paris, 1963-5, p. 61, says: "Rosicrucianism (...) has played a much more important role than one might think: e.g. Descartes, no doubt through the mediation of his friend, the mathematician Faulhaber, had the opportunity to join, seduced as he was by such mythical and humanitarian theories, on the occasion of his stay in Germany and Holland; and Descartes' famous 'dream', as well as several juvenile works, such as the *Olympics*, are telling under this point of view." Hutin refers to *A. Georges - Berthier, Descartes et les Rose-Croix*, in Revue de Synthèse, XVIII (1939): 9/30; *G. Persigout, L' illumination de R. Descartes rosicrucien*, in *C.R. du Congrès Descartes*, Paris, 1938; id., X novembris 1619, Paris, 1938. It is known that the rationalist historiography usually conceals this (in order to get rid of the theosophical-syncretic tinge that would then hang over Descartes).

Higher p. 55 noted that the Oratorians and Augustinianism played a role in Descartes' (thinking) life: one has only to look into such a simple book as *L. Keeler S.J.*, *S. Augustini doctrina de cognitione* (S. Augustine's theory of knowledge), Rome, 1934, to note how,

a/ side by side with the methodical doubt, borrowed from the neo-academy (Arkesilaos (-314/-240), Karneades of Kurene (-214/-129)) and in the line of 'n Gregory of Nussa (335/394), the great Eastern Church Father,

b/ the reflexive method in Augustine is strongly religious, of course, at work; - which Descartes in his way has redirected.

Incidentally, self-reflection was 'a method committed from Augustine onwards and especially during the Renaissance: see *Fr. Jeanson, Montaigne et l' expérience de soi*, (Montaigne and the experience of oneself,), in *Esprit*, XIX (1951): 9, pp. 321/342. See also above 58

a/ Augustine's self-disclosure

 ${f b}/{
m juxtaposed}$ with immediate naturalism of S. Francis, - which is still evident with Descartes).

The role that God plays as the guarantor of real ideas with Descartes is also analogous to the Augustinian view.

However, the intuitive method plays its own role here, as a source of axioms for the deductive structure of thought: Descartes needs "first principles" in order to build his baroque system geometrically-deductively from there. Reflexive intuition provides the axioms.

"Here is the list of all our cognitive processes which enable us to attain the knowledge of things without any fear of error. There are only two, intuition and deduction. By contemplation I do not mean:

a/ the belief in the changeable testimony of the senses or

b/ the deceitful judgment of the imagination with its poor predictions, but the understanding which the pure and attentive mind forms with such ease and clarity that no doubt remains as to what we understand. Or - which is the same thing - the concept which the pure and attentive mind forms, without any possible doubt, from the light of reason alone and of which the certainty, in view of its great simplicity, is greater than that of deduction, although the latter - as we have noted above - cannot be made wrong by man. For example, anyone can see, by intuition, that he exists, that he thinks, that a triangle is formed of three lines, that a sphere has only one surface, etc. (...).

On the other hand, this clarity and certainty of vision is necessary not only for statements alone, but also for any kind of reasoning (discourse, exposition). Suppose, for example, that the following conclusion is reached: "two plus two is the same as three plus one.

In that case one must not only see that two plus four is four and that three plus one is also four, but also that these statements have as their necessary conclusion the third, the first given. It may now be asked why we have added here, to the contemplation, another way of knowing, the deduction, by which we mean any necessary conclusion drawn from other things known with certainty. This was necessary because one knows most things with certainty, without their being apparent, provided one derives them from true principles." (*Descartes, Regulae ad directionem ingenii*, 1628).

Now one understands why E. Husserl (1859/1938), the founder of intentional phenomenology, chose the cogito, i.e. intuition the introspection, like Descartes, as the starting point of philosophy:

1/ the direct contact

- 2/ of a cognitive nature
- 3/ with the object itself, the I and its thinking existence, is the absolutely certain starting point, apodictically certain, and on it
 - (i) Metametaphysics,
 - (ii) the physical (the mathematical physical) and
 - (iii) build up the other subject sciences, in rethought form.

Only Husserl reproaches Descartes for having conceived of thinking I as 'res', a thing, among the other 'things' of the world - and thus lapsing into psychology, where Husserl conceives of thinking I as 'pure', as the center of (all reality) encompassing thought-work, 'transcendental', as he puts it, i.p.v. psychological, conceives (cf. *F.W. von Herrmann, Husserl und die Meditationen des Descartes*, Frankfurt, 1971, S. 8/16).

Which does not prevent Heidegger and Fink, in turn, from joining Husserl even with greater appreciation of Descartes' inconsistency, where he goes beyond his egological immanence (the insistence on the inwardness of his self) and appeals to the existence and veracity of God (among other things, to prove his ideas (= representations in his consciousness) as reliable: these ideas, at least the real ones among them, come from a reliable God and not from a threatening God):

Heidegger, Fink et al. claim that by breaking through his conscience (= incomplete idealism), Descartes shows his sense for the openness of consciousness to the world (the world as the whole in which we live, think, is the horizon within which everything - and thinking and the body and the other things, God included has its place: not the conscious I and its 'thinking', through the world is decisive; thinking is precisely 'being in the world' before it is consciousness). Von Herrmann calls this the cosmological dimension.

Meanwhile, it is clear: Descartes believes in a pure 'reasonable', 'intellectual' intuition or contemplation (as distinguished from e.g. a sense); it expresses itself in the understanding, which, better expressed, is that intuition itself. Something that Husserl will preserve (the eidetic phenomenology: consciousness 'grasps' the cognitive in an eidos (platonic word for idea, understanding) its intuition). One confuses, in passing, 'eidetic' when talking about dream visions or day-conscious visions (second sight), not with 'eidetic', when Husserl is talking about the thought content of a concept.

C.S. Peirce's criticism of *Descartes* is perhaps the harshest ever put forward. *W.B. Gallie, Peirce and Pragmatism*, New York, 1966, p. 59/83, summarizes it:

(1) Complete and true methodical doubt does not exist;

we always start with all our prejudices, says Peirce, and these only come into play in a real way when we have a positive reason to doubt (viz. when two data in our consciousness are contradictory); the Cartesian doubt is superficial - something which the structuralists will concur with by talking about ideology: 'ideology' is a set, indeed system of representations ('ideas') with the appearance of a strictly coherent (consistent) knowing (concerning religion, politics, morality, philosophy, economy, etc.), yet without sufficient awareness of its origin;

a/ According to Marx and *Engels* (*Die deutsche Ideologie*), the prevailing "conceptions" (ideology) are first and foremost the (un)conscious translation of the existing socio-economic states, which express themselves therein, in (seemingly) rational form:

b/ Freud speaks of the rationalization of irrational, unconscious thought content and its correlates:

c/ Nietzsche points out that the vital urge to live is expressed in a non- or post-vital thought, which conceals more than it reveals:

d/ The structuralists say that our speech is governed by unconscious language structures:

a/ we speak the language of our socio-economic class (Marxist);

b/ we speak the language of our disguised vital will to power (Nietzsche);

c/ we speak the language of our on- and subconscious erotic or aggressive instincts (Freudian);

Conclusion: our 'ego', our 'I', as self-conscious independent 'subjectivity' or 'subject',

1/ whether it is simply professional scientific-psychological

2/ or 'transcendental-phenomenological' in a philosophy-founding sense, - is merely the surfacing of a kind of powerless point in an ocean of linguistic phenomena and structures of speech; that 'I' does not know, in many cases, indeed thoroughly, what it is saying, if it is saying anything, guided as it is by impulses and formulas without its knowing;

If "humanism" means the fact that the human self, as conscious and freely disposing of itself the person(s) in a cutltuurhistorical process engaged, makes history, then the structuralist is a-humanist, indeed he proclaims "the death of man" as a being who lives and thinks free of unconscious, subconscious influences, man as Descartes experienced and conceived him, center of systematic-rational humanism,

(2) Touchstone of certainty: Church or individual?

While scholasticism, Peirce says, took as its touchstone of certainty the universal church and, in particular, the testimony of its philosophers and theologians, Descartes teaches that certainty lies in the individual: compare this with the positive sciences and the mathematical-logical sciences, where something is accepted as certain only if it has passed the test of the interpretive community, the other sciences as the controlling group, and where creative individuals await the critique of fellow explorers (this is Peirce's logical socialism);

(3) Evidence: pluralistic or intuitive-axiomatic?

While scholasticism, Peirce argues, accepted a pluralism of proofs (from reason, from faith, from the authority of great thinkers, from probability), there Descartes recognizes only one type of (non-intuitive method) proof, the deductive, which forms a linear chain, starting from a narrow intuitive-axiomatic base,

a/ chain, which is as weak in its entirety as its weakest link;

b/ more so, later mathematics starts from a pluralism concerning axioms (which are chosen on the basis of economy (as little as possible), elegance, educational effectiveness);

c/ Descartes, in addition, forgets that unilinear Euclidean geometry, historically, grew out of a plurality of predecessors, each of which worked out a piece, before Euclid constructed the unit;

(4) Are the data explainable?

While the scholastics did have their intellectually impenetrable mysteries of faith, they nevertheless attempted to rationally explain all that was created, where Descartes not only did not explain many data, but declared them to be inexplicable (except for the sentence "God makes it so"): science does not know this.

This fourfold comparison with *Peirce*'s scholasticism and criticism appeared in *Journal of Speculative Philosophy*, 1868. There is one other criticism of Peirce that we note briefly.

Descartes had to endure criticism in the first place from G.B. Vico (1668/1774), who started from Renaissance Neoplatonism (Campanella) and from cultural-historical insights, to criticize Descartes doubt, starting from 'n sensus communis (the opinion of the common man), situated before any analysis (of philosophical or professional or technical nature).

Later, the Scottish school, which relied on the census communis (common sense), the common sense of man, present in all men and providing certainty, based on experience, about the reality of the external world (i.e. Reid (1710/1796), Steward (1753/1828) et al. are immediate intuitionists (they are not conscientialists) who brace themselves against Locke, Berkeley, Hume (with their psychologistic conscientialism)).

One also has Maine de Biran (1766/1824) who follows the reflexive method (one thinks of the 'sens intime', the inner experience, which has an all-encompassing scope), yet without conscientiousness:

a/ especially the effort ('effort': **i/** the 'I' strongly supports (active side) with the hand **ii/** on a hard object, which 'resists' (passive side)) shows how 'I' and 'non-I' are simultaneously experienced as one and yet opposite; again, one has immediatism regarding experience.

b/ de Biran himself extends this to the paranormal dimension and the unconscious: in his Mémoire sur les perceptions obscures (Memoir on obscure perceptions), (1807), Paris, 1920, he speaks of the 'obscure perceptions' (term from Leibniz, by which he indicates 'small', too weak and therefore unconscious perceptions), which are true (o.c., p.4) and would therefore be better called 'obscured' perceptions, such as e.g. premonitions that turn out to be correct, some dreams ('premonitions gained during sleep and a.k.a. by the 'sympathy' (unconscious agreement) of a 'precordial' sense ('sens précordial'), (o.c., 27: the example of Galenos that ended in healing); etc.;

Such inner sense works better at certain times, says the Biran; it seems scattered, suppressed, put on guard during daily activities, to work well in the dream: we have here, then, the reflexive method of giving the unconscious and subconscious a place and this in 'immediatism, free from immanence philosophy.

c/Cf. also M. de Biran, L'effort, Paris, 1966, pp. 163/190, where the experience of God is discussed.

Conclusion: 1/ Vico, 2/ Scottish common-sense philosophy, 3/ Biranism, - they are immediatisms that take a stand against the confined philosophy of idealists. Peirce with his three categories,

- (i) quality, i.e. the thing as it offers itself to consciousness,
- (ii) relation, i.e., the encounter of consciousness with the object of its attention, , with the 'brute fact', the undefined, interpretation-free object, (which corresponds to Husserl's 'intentio', except for conscientialism, since Peirce is immediatist; which corresponds to the 'encounter' of the existentialists, except for the strongly emotive, which is much less present in Peirce, given his scientific disposition);
- (iii) representation, sign, i.e. the signification, i.e. the giving of a thought and speech sign to the qualitative (in its being; cf. 'quality') met (cf. 'relation') thing or given, whereby the self interprets something as something, e.g. by saying (or at least thinking):

"That there is a rose!"; seeing something as something is evidence that the subject (the self), in its diadic or dual encounter with the object, always employs a third term, namely, a thought and speech content, which is the sign or representative of the object with the subject, - leading to the adoption of a triadic or tripartite relation (object, subject and thought and speech sign with which the subject 'designates' the object as object).

This threefold immediatist approach to Peirce's reflexive approach is the application of his theory of categories, which includes firstness (the merely relation-free term), secondness (the relation between the terms), thirdness (the signification or of sign provision, representation) as basic concepts to describe reality.

This means that Peirce does not believe in and sign-free intuition à la Descartes:

a/ Descartes' axiomatic intuitionism is dyadic (the belief in an immediate meeting of I and object in its consciousness immanence);

b/ Peirce's intuition is triadic: the intuition of an object by a subject is always an interpretation of that object characteristic of that subject, which always carries with it its (un)-conscious prejudices, its ideology (the structuralists would say), its educational and character traits. Cf. *K.O. Apel, C.S. Peirce, Schriften I (Zur Entstehung des Pragmatismus*, (Writings I (On the emergence of pragmatism), Frankfurt, 1967, S. 48/49; 53. -

Peirce blames Ockham, Descartes, Locke, Kant and others, figures of modern philosophy, for their theory of knowledge which claims that the causal mechanism of knowing (the action of the data on the senses and consciousness) cuts off that same knowing from the data themselves in their reality and that, therefore, that knowing has to do first of all with the action of the data in the receptaculum; (the consciousness interior) and not with the things themselves, 'out there', which are then 'unknowable' in their structure of being. This means that Peirce is fiercely anti-phenomen(al)ist (phenomenism: we know only the phenomenon in which the thing presents itself, and not the thing in itself).

How does this go together with his theory of representation? The thing is a sign, an information, a message; that information or sign it passes on in the encounter (relation) with a subject.

Note -- On the methodical doubt in Descartes.

- **a/** Descartes draws inspiration from scholasticism (Augustine): the latter doubts in view of faith ("Gredo ut intellegam", I believe so that I can see: the theosophical view, i.e. one overcomes the desperation of reason by taking revelation as a source of knowledge),
- **b**) he also inspires scepticism: Purrhon, Sextos Empeirikos, Montaigne were stuck in doubt.

c/ Descartes forges from doubt an apodictic statement: what is absolutely certain is that I doubted. Well, doubting is 'thinking' (i.e. conscious beneficence; see above p. 69). And 'thinking' is being, actual existence. So it is apodictically certain that I exist, since I 'think' (even when I doubt, I think). Cogito, ergo sum: I think; therefore I exist. Descartes does not regard this as reasoning but as the reasoning formulation of an intuition, which is evident in itself. It is "evident" that I think and thinking exist. This evidentness criterion will remain the rule by which he starts from this basic fact and progressively introduces new evidentnesses:

a/ so it is not 'evident' that the object of my thinking exists outside me, in itself; after all, nature deceives me: I think that the sun rises and sets, while, in fact, the earth revolves around its axis; so can the rest! My imagination, my errors of experience, an evil God who deceives me, - all these things vote me into confinement in my "thinking.

b/ Or yet! There is among my ideas in my consciousness one that has a different origin, the idea of an infinite and perfect being, God. This idea does not come from me, finite being

1/ with limited causality (which an infinite being cannot cause) and

2/ with development in time and its course, no,

a/ that idea precedes all other ideas and

b/ Without her, the idea of the finite would be impossible. Consequence: the idea of God in my consciousness comes from God Himself. Consequence: God must exist; that is obvious at the same time! He shows himself in me as the idea of an infinite being. This idea is innate.

Conclusion: I am apodictically certain that (i) I exist, (ii) that God exists (by the latter I break through my consciousness immanence).

c/ Even more: on the existence of God all truth, all science depends! The world of bodies (the extended substance) exists outside my consciousness, because my real ideas about the world come from God (by innate nature): my instinctive belief in the existence of an outside world I have because of a God who is incapable of deceit.

Conclusion:

- (i) God is the infinite substance on which everything depends (including my thinking existence: Descartes is only a limited idealist!),
 - (ii) the soul is a thinking substance,
- (iii) the body is an extended substance. Thinking and extendedness Descartes calls the attributes of finite substances. Immediately, modern metaphysics is structured: (i) theology, (ii) anthropology, (iii) cosmology.

c/Descartes: mathematician and professional scientist.

Descartes, in addition to being a mathematician (mathesis universalis - cf. pp. 65/67 supra (Foucault's interpretation of the comparative-rational method, improved by that of G. Jacoby, who does not share Foucault's a- and anti humanist structuralism, of course)) and introspective, is also a professional scientist, empirically minded anatomist and physiologist in the style of the XVIIth century, *Cl. A. Hooker, Physical theory as Logico - Mathematical Structure*, Dordrecht, 1979, argues that natural science is fundamentally **a**/ mathematical, **b**/ philosophical, **c**/ comprehensible and **d**/ empirical: well, Descartes is definitely pioneering to this day in that sense.

As the Reformation approached the Bible as a book, open to all, so since the Renaissance and Descartes very particularly, natural science approaches nature as a book open to all. For Descartes, as for his illustrious predecessor Galileo, access to the "book of nature" is the experiment, which is the application of the *Novum Organum* of the purely theoretical *Fr. Bacon* (see above pp. 37/41).

Reeds, A. Weber, Hist. d. l. phil. Europ. Paris, 1914-8, p. 282, noted: "It is with good reason that the most recent historians of Cartesianism emphasize the impossibility of separating in Descartes the philosopher from the scientist: it is not even unjust that French positivism (cf. A. Compte (1798/1857) is the founder of the scientisctic sociologism that is rampant at our day) ranked among its ancestors the one who attempted to make philosophy an exact science. The defect, inherent in him and in a great many metaphysicians, a consequence of his scholastic upbringing, is that impatient desire to draw conclusions and to see them systematized, which prevents him from making a sufficient distinction between the method of scientific education and the method of exposition.

Application of the geometrical method to metaphysics with the intention of turning it into an exact science: such is the leading idea of Cartesianism. The metaphysical more geometrico, according to the geometrical (explanation) method, takes as its fundamental concept (= category) the substance (i.e. God is the only substance in the absolute and unlimited sense, source of the two relative and limited substances, mind (with as 'attribute' or characteristic feature thinking as higher determined, i.e. consciousness, in the exclusive sense) and body (with as attribute the extendedness (étendue) also in the exclusive sense). "Behold at the very front 'a deduction which carries the germ of Spinoza" (Weber, o.c., 286).

D. Dubarle, Concept de la matière et discussions sur le matérialisme, (Concept of matter and discussions on materialism), in Science et Matérialisme (Cahiers de recherches et débats de Centre Catholique des intellectuels français) (Research Notebooks and debates of the Catholic Center of French intellectuals), No. 41 (déc. 1962, 37/70, typifies the ancient concept of hulè, matter, substance especially as described by Aristotle in his struggle against atomism (Leukippos, Demokritos, Epikoeros, Lucretius):

a/ with <u>Platon</u> and with Aristotle, 'matter' means pretty much pure possibility, absence of idea or form, which must get its structure from higher realities - idea (form), soul, higher spirit;

b/ with the atomists, matter is 'mechanically' moved atomic quantity. Against this background, Dubarle situates the modern concept of matter as "the divisible, the deformable and the movable and nothing but that" (a.c., 47).

Why?

a/ Partition is segregation movement;

b/ deformability (figurabilité, - figure is form) is isolation and aggregation movement;

c/ movement is (in contrast to the antique-medieval notion of all change encompassing) now purely place change (local movement).

Conclusion: matter is - and essentially - local motion. Motion in this sense is the state of nature of matter, governed by the law (the invariant) of conservation of the quantity of motion, i.e. the collection of the mutual shocks (interactions) of the parts of the bodies in motion (whether these are rocks, plant parts, animal limbs or human body parts) (a.c., 47/48).

This movement is, for Descartes, purely passive: the bodies do not "move themselves", but "they are moved"! And well nature necessary. The initial impulse comes from the infinite substance, God, and this as the initial impulse of a rectilinear motion, which, in retrospect, whirlingly forms stars, planets, etc. "The material world is an apparatus (une machine), an endless chain - not an infinite chain - of movements, whose origin is God." (A. Weber, o.c., 288).

Except for the initial pulse, the universe machine is exclusively a physical and not a theological matter. Purposiveness e.g. is not to be sought in it. When *K. Marx / Fr. Engels, Die heilige Familie*, Frankfurt a.M., 1845, 6, write:

"In his physical, Descartes had granted self-creative power to matter and conceived of mechanical motion as its life thread", then this is expressed a bit too 'dynamically' (dialectical dynamics), but the core is correct. And, where they say:

"Descartes) had separated his physical appearance from his metaphysics. Within his physical, matter is the only substance, the only ground of being and knowing", then this is incorrect insofar as Descartes conceived, l'infini, God, as the horizon of his thinking and bodily world (cf. von Herrmann on the cosmological dimension of the cogito which from the outset is open to the overall being and divine horizon); yet it is correct insofar as he introduced a radical dualism between mind(s) and bodies: mind is thinking, without substance; body is expansiveness without thinking; both exclusive of each other. The two substances, mind and matter, are radically opposed to each other.

When K. Vorlander, Phil.d. Neuzeit, Hamburg, 1966, S. 17 writes:

"All natural phenomena must therefore be explained mechanically, by shock and pressure, which are nonetheless not sensory but understandable, as balances between the quantities of movement of adjoining places of space. The interaction between 'things' is constructed according to a purely geometrical view. Descartes' apparent materialism is in fact mathematical idealism", then that is also correct.

That mathematical idealism is all-embracing as far as matter is concerned: "Descartes was the first to want to work out a mechanics not only of the heavens but also of the earth - and both of inorganic and organic nature. Physiology as well as astronomy are in his eyes purely mechanical sciences in which a soul has no place.

The Cartesian Humanities.

Man, as a dichotomy of thought (consciousness) and extension (body) naturally posed a tough problem for *Descartes*:

- (a) sometimes he speaks as if there were interaction between soul and body, between consciousness and extensiveness (*Traité des passions*);
- **(b)** sometimes he expresses himself radically dualistic, as he does in his (meta)physical.
- i) speaking non dualistically, he says that the soul is one with all the parts of the body and that it is particularly active in the pineal gland; that soul and body act along each other along the pineal gland and the 'esprits animaux' (the life spirits).
- (ii) Yet, for the rest, he adheres to dualism: the body goes, feeds, breathes; the soul enjoys, suffers, desires, hungers and thirsts, loves, hopes, fears, perceives the ideas of sound, light, smell, taste, resistance, watches, dreams, falls into perdition. Yet all these phenomena are the result (not the cause) of the "movements" caused, in the brain matter, which is the seat of the soul, by the entry and exit of the life spirits;

Consequence; without the body (especially the brain) these phenomena would totally disappear (even the memory of them). Only the soul would remain with ... the grasp of pure ideas (substance, thought, space, infinity, - ideas totally independent of sensory experience).

There is a side and tendency in Descartes that is empiricist, indeed materialist:

"Mechanical materialism in France joined Descartes' physicalism to the exclusion of his metaphysics. His disciples were antimetaphysicians by profession, viz. physicalists. With the physician Le Roy this school begins; with the physician Cabanis it reaches its climax: the physician La Mettrie is its center. Descartes was still alive when Le Roy transferred that Cartesian construction of the animal - as, in a similar way, the 18^{de} century la Mettrie - to the human soul, declaring the soul to be a mode (way of being) of the body and ideas to be mechanical movements. Le Roy was even convinced that Descartes had hidden his true opinion.

Descartes protested. At the end of the XVIIth century Cabanis (1757/1808) gave Cartesian materialism its finished form in his work *Rapports du physique et du moral de l' homme* (Reports of the physical and moral of the man), (1802)" (K. Marx, Fr. Engels, Die heilige Familie, 1845, 6). Yet not only Marx and Engels claim this:

"One sees that, although rationalist and spiritualist in principle, the founder of French philosophy, in fact approaches empiricism and materialism. His 'animal machine' being an animal conceived as a device, anticipates the *Homme machine* (1748) of *La Mettrie* (1709/1751)." (A. Weber, Hist. d.l. phil. Europ., 1914, p. 291).

There is clearly something enduring in Descartes' theory of man: *J.H. van den Berg, De reflex*, (metabletic yet socially critical studies), Nijkerk, 1973, describes the characteristics of the reflex. A model is Darwin, who, safely behind thick glass, looked at a South African puff adder in the zoo in London and, against his intention, backed away a few cubits when the animal bit him: the reflex

- (i) is beyond the conscious will,
- (ii) is not learned, but innate cf; herewith *I. Eibel-Eibesfeldt, l' Homme programmé* (*L' inné facteur déterminant du comportement humain*), (The programmed man (The innate determining factor of human behavior), Paris, 1976 (Dt: *Der vorprogrammierte Mensch*, (The pre-programmed human,), Wien/München/Zürich, 1973), at least in part (there are also learned or conditional reflexes),
 - (iii) is form-fixed (determined),
 - (iv) is fast,
 - (v) is effective (o.c., pp. 11/14).

The author says that mechanical consists in eliminating 'sense', 'purpose', 'meaning', 'efficacy' from the chains of cause and effect that make up material nature, as if it were 'one big mechanism' (o.c., 15), while vitalism, according to a definition by A. Comte, the founder of positivism, consists in refusing to reduce the higher (in this case the living) to the lower (in this case the inorganic).

The mechanistic refuses precisely that distinction between "higher" and "lower"! Why? Because the vitalist presupposes in the organic 'liveliness', 'soul', 'inspiration', i.e. a principle which expels death from matter and introduces life, as something higher. - Well, the reflex plays a leading role in the triumph of mechanism (concerning life) and the retreat of vitalism. Van den Berg distinguishes four periods in the study of the reflex:

- (i) The speculative period (from Descartes to 1743),
- (ii) the early experimental period (1743/1832),
- (iii) the mechanistic interpretation of experimental reflex physiology (1832/1906), in which the body reacts like an automaton according to the stimulus-response sequence (S-R scheme) and the person(s) is a disturbing factor,
 - (iv) the current period, which shows double views:
- **a**/ the crisis of the idea of 'reflex' in neurophysiological research (Sherrington's synapse (1906)) and in cybernetics (+/-1950) (feedback);

b/ the ideological reflexology (Pavlov: reflex psychology; Watson: behaviorism)

with its spinal (gifted with reflexes running across the spinal cord) human is a psychosociological mechanism, also F. Skinner's reward-behaviorism (which ignores Sherrington and cybernetics) is an ideological mechanicism in the same vein.

However, Cartesian humanism clearly has a second aspect that is non-mechanistic and justifies Descartes' protest against Le Roy et al. That aspect brings up *N. Chomsky*, *La linguïstique cartésienne* (*un chapitre de l' histoire de la pensée rationaluste*), (Cartesian linguistics (a chapter in the history of rational thought),), Paris, 1969 (Eng.: *Cartesian Linguistics*, New York, 1966). The famous linguist proceeds from A.N. Whitehead's thesis that the West has lived, for 225 years, off the ideas of the XVIIIth century, that is during the XVIIIth and the early XIXth centuries, and that especially in the linguistic field. Cartesian linguistics contains two time periods:

(i) The general grammar (Port-Royal, 1660),

about which higher p. 67 - Foucault, of course, understands this differently than Chomsky, for whom the flat, subjective structuralism is over, in that Chomsky advocates a "generative" (producing) grammar, which describes the linguistic and speaking competence ("competence") of both speaker and listener, which is expressed in the effective linguistic and speaking operations, - performances ("performance"), which constitute the direct and lateral (language) speech or discourse-;

(ii) general linguistics

(Romantic period or immediately after, early XIXth century). These two types are the elaboration of what Descartes himself said in passing about language and speech: can one, according to Descartes, explain perfectly all animal behaviors by considering the animal as an automaton and can one explain a good portion of human bodily behaviors in the same mechanical way, yet the essential difference between man and animal is clearly observable in man's language and especially in man's creative power to form new utterances expressing new ideas, adapted to new situations.

Even the dumbest and most deadened people surpass the automaton in this, especially the speaking automaton. They possess, even in the absence of appropriate organs (think of the deaf and dumb, who invent signs themselves (creativity) in order to make themselves understood), language-creating power, which is not independent of external stimuli.

Consequence: that non-mechanically explainable aspect of the fellow man obliges the reason in us to conclude to the existence of another "spirit" which is speaking through the words and which is essential reason.

Until the XIXth century with Wilhelm von Humbold (1767/1835), the founder of general linguistics (o.c., 40ss.), who speaks of "energeia", "Tätigkeit" (after Aristotle's term) to capture the creative aspect of speech in a professional term.

Von Humbold therefore speaks of the organic form (which is innate) of language (as opposed to the mechanical, externally imposed form): language is a living organism that unites many parts into a coherence (one sees:

1/ That the Romantic conception of biological realities that differs from the Cartesian one.

2/ but that it corresponds to the creative aspect of Descartes ideas of language), -coherence which is more than 'elements' and their 'combinatorics' to which the structuralists reduced the organic conception of 'form' (in order to make language 'scientific').

Cf. also A. Kraak and G. Klooster, Syntax, Antwerp, 1968, p. 14vv. (the generative description of language); G. Schiwy, Neue Aspecte des Structuralismus, (Neue Aspecte des Structuralismus), Munich, 1971, S. 85/86; A. Fodor/ J. Katz, The Structure of language (readings in the Philosophy of language), Prentice-Hall, 1964, pp. 50, 119 (theory of language), 211 (grammar), 384 (id.) 547 (criticism of Skinner's verbal behavior).

Note.-- On innate character.

Briefly see *I. Eibl-Eibesfelt, Der vorprogrammierte Mensch*, Wien, 1973. From the empirical side, innatism has been ridiculed; but scientifically the matter is not so simple: there is indeed an innate human nature (just as there is an innate animal nature), which, independent of the environment, acts with innate reactions. Stellen emphasizes the philogenetic side of innatism: in the course of the evolution of life forms, all living things have acquired reaction forms, and this selectively (not just arbitrarily), which have formed a nature that now appears as innate.

Opm. - The Soviet Philosophy

This one, of course, had to deal with the crisis of mechanicism in its Pavlovian form. Cf. *H. Dahm, Die Dialektik im wandel der Sovietphilosophie*, (The dialectic in the change of Soviet philosophy,), Köln, 1963,S. 70/72 (*Neurophysiologie und Kybernetik*). Thus N.A. Bernstein maintains that the new neurophysiology and cybernetics "which expose Pavlov's doctrine, because of its mechanistic and autonomistic character, as a defeated position on physiology" (o.c., 72).

Cartesian dualism in a broader context.

Balthasar Bekker, a Cartesian, once reasoned as follows: if no direct influence emanates from the spirits on the bodies, and if God, as infinite wisdom and goodness, is the necessary and sole intermediary concerning relations between the soul and matter, then witchcraft, magic, spiritism are, under all their forms, a vile and ridiculous superstition (superstition) (*B. Becker* (1634/1698): *The Enchanted World*, 1690-1).

One senses here the influence of occasionalism (Geulinckx and Malebranche), which is more or less locked into Descartes' religious dualism as one possibility of interpretation.

The cartesianizing rejection of the paranormal in the XVIIth century, the age of baroque virtuosi, passed into the XVIIIth century enlightenment: so writes W. James, the father of American pragmatism (1842/1910), for many years president of the Society for Psychical Research at New York founded in 1884 (two years after the Society for "psychical" (understand: parapsychic) research at London):

"The refusal of the modern enlightenment to recognize the hypothesis of possession, despite the long human tradition based on concrete experiences with it, is for me a peculiar example of the power of fashion in the field of science. I am convinced that the theory of demons will, one day, be taken seriously again. One must, indeed, think 'scientifically' to be so blind and deaf as to ignore such possibilities."

Cf. L. Marcuse, Amerikanisches Philosophieren (Pragmatists, Polytheists, Tragiker), Hamburg, 1959, S. 89/91 (Hypothetical Metaphysik: auf den Boden der Parapsychologie), (Hypothetical metaphysics: on the ground of parapsychology). From this statement by James in 1909, one can see how long and how thoroughly the antiparapsychological disposition of rationalism has affected the so-called "scientific" or "rational" mentality!

1/ Indeed, with Descartes himself the dualism is such that there is no question of psychically unconscious or subconscious or preconscious phenomena. *J. Waldighofer, Was ist Tiefenpsychologie?* (What is depth psychology?), in *Schweizer Rundschau*, jrg. 48: 8/9 (*Sondernausgabe Psychologie*), S. 674, writes:

"Since the day Descartes split the world into two mutually exclusive halves, into the material-spatial (quantity), and into the immaterial-spiritual (quality), it has been part of the a-priori program that the psychic ('perceptiones') should be equated with consciousness."

Only the machine-body was 'unconscious' (which anticipates a kind of cybernetics or, rather, precybernetics, which one still finds with Nietzsche, where he says: "Curious: that on which man is most proud, his self-regulation by reason, is also performed by the lowest organisms and better, more reliably"!). Only with Leibniz, says Waldighofer, ibid., does one find a place for the psychic unconscious: knowing ('apperception') rests on summering of small psychic phenomena of consciousness ('perceptiones'), which constantly fill the soul, but are individually too weak to penetrate consciousness in a clear way.

- **2.** Yet, with the unconscious, subconscious or preconscious, Descartes also excluded the paranormal; well, that paranormal had as its center the soul body and the subtle or "subtle" reality in which the subtle soul body bathes.
- J.J.Poortman, Ochëma (History and sense of hylic pluralism or dualistic materialism), Assen, 1954, pp. 64/72 talks about anthropological dualism, which
 - 1/ in Antiquity occurs at most in weaker form,
 - 2/ but is specially associated with the name of Descartes.

According to what Poortman calls psychohylism (i.e. the conviction that the (immaterial) soul (psycho-) is never without a subtle aspect (vehicle or so called) on its own ground (hylè = matter), the exclusive dualism between immaterial soul and material body is impossible: "Descartes however posits the difference of essence between soul and body by virtue of which the soul eo ipso (by the fact itself) can never be material." (o.c., 65).

The closedness of modern rationalist thought to hylic (= concerning matter) pluralism (a plurality of types of matter, **a**/ the gross or physical and **b**/ the fine or subtle) is on:

1/ secularism, which takes "this world" for the real (or at least the knowable) world, 2/ combined with Cartesian dualism, with its psychophysical parallelism (i.e. the parallelism of the conscious (= psychic) and the physical (= 'physical').

A/ An important milestone in the pre-history of Cartesian dualism is (besides Neoplatonism and St. Augustine) the teaching of Thomas Aquinas (1225/1274) in his doctrine on the angels and the souls of the dead before the resurrection: of a fine material body of the angels and of the souls of the dead. An important milestone in the prehistory of Cartesian dualism is (in addition to Neoplatonism and St. Augustine) the teaching of Thomas Aquinas (1225/1274) in his doctrine on the angels and souls of the dead before the resurrection: there is no question of a finely material body of angels and souls of the dead before the resurrection (in whom a kind of appropriateness to a resurrected "subtle" and "ready" body awaits its realization at the resurrection at the end of time): they are after all purely immaterial! In general, the Augustinians did not go that far in their spiritualization of angels and human souls after death.

B/ That angelism of Thomas and the Thomists consistently elaborated Descartes dualistically. "J. maritain (Le songe de Descartes, (The dream of Descartes,), (1932), Religion et culture, 1930)) has (...) aptly remarked that Descartes made angels out of human souls - that is, already during this life - namely, permanent spiritual substances, as Thomas (...) conceived angels." (o.c., 70). Maritain speaks of "un ange habitant une machine" (1932) and of "un ange conduisant une machine" (1930).

Consequence: the principled opposition to a plurality of materies and a subtle or fine material aspect of angels and human souls per se is even stronger among Cartesians than among Thomists.

C/ This same allergy to hylic pluralism is also present with Kant and the Kantians, in Cartesian-Thomistic line, and works after into our century. Imm. Hermann Fichte (1796/1879) and the son of J. Gottlieb and late idealist opponent of Hegel, G. TH. Fechner (1801/1887), the romantic psychophysicist, - A. Schopenhauer (1788/1860), the voluntarist, to a lesser extent, are exceptions and go against the Kantian spirit. They again open the way for the trichotomy 'spirit' (immaterial)/ soul body/ (physical) 'body' instead of the dichotomy 'immaterial spirit or 'soul'/ physical (gross material) body', peculiar to the anthropological dualists like Descartes.

It was opposed to the Renaissance philosophers and their view of man. Thus e.g. Paracelcus (see above page 58) and others. First of all, the life spirits (spiritus animales et vitales, "esprits animaux", "Nervengeister") or animal spirits, which have been widespread since Galenos of Pergamon (+129/+199) (though known even earlier in the Hippocratic writings): These are ethereal (hence the name 'pneuma', 'spiritus') and play a role in the human organism, in particular as the intermediary between the soul and the body; the blood soul, the breath, the nervous system are all connected with them (cf. the petrified expression: "The spirits of life have departed"); - what is meant is not so much the soul as a visionary body distinct from the soul (which, e.g. as a grave ghost, has been in existence for a time).e. as a grave ghost survives physical death for a time after it has passed away as life spirits).

Poortman speaks of physiological pneuma and psychological pneuma. S. Paul and the Christian tradition with him then also speak of a "pneumatic" or "spiritual" soul body, which is characteristic of the Christian (and which is the result of the resurrection pneuma that the glorified Christ acquired for all who are one with him). Cf. Poortman, o.c., 36/50.

Note: Descartes also speaks of 'esprits animaux', but with him these spirits of life are thought to be purely coarse (as with many in modern humanities and medicine).

The problem here is that many writers write about life spirits etc. without being sensitive, i.e. without perceiving such phenomena themselves: in their language this then becomes a concept thought in rationalist-secularist terms. It should also be noted that the specialist terms for the subtle intermediate body are fluid and frequent. Which makes the matter particularly complicated.

Bibliographic note.

- -- Decent still remains *J.Feldman, Occult Phenomena*, Brussels, 1938 (// Dt. *Occult Philosophie*, Paderborn, 1927), a Catholic work; new and current is
- -- P. Andreas/ C. Kilian, PSI (Parapsychological Investigation of Fantastic Appearances), Deventer, 1974; very particularly on the intermediate body of subtle nature:
- -- W. Gmelig/ W. Gijsen, The aura (Radiation of man, animal, plant and stone), Deventer, 1975 (proposer is clairvoyant and paints; Kirlian photography is also involved);
- -- S. Krippner/ D. Rubin, Lichtbilder des Seele (Psi sichtbar gemacht. Alles über Kirlians Aurafotographie), Bern / Munich, 1975 (// Eng.: The Kirlian Aura, 1974);
- -- *C. Tiret, Auras humaines et ordinateur*, Paris, 1976; religious in the spirit of G. Marcel, the Catholic existentialist:
 - -- J. Prieur, L' aura et le corps immortel, Paris, 1979.

Topically, anthropological dualism is outdated.

Indeed, since Freud's psychoanalysis (1856/1939) and the depth psychology which it gave rise to, the psychic unconscious was introduced, clearly and as scientifically as possible, alongside the physical unconscious; yes, especially since the group therapies, the body has been revalued; one thinks e.g. of *A. Lowen, Pleasure*, New York, 1970 (Fr.*Le Plaisir*, Paris, 1976): the priority of the psychic was corrected by an advance of the body (now no longer conceived as a machine controlled by an angel, but) as 'life', as a cradle which not only governs anatomy and physiology, but psyche and humanity (the intersubjective and the social), which, if the body does not function properly as 'life', are also in crisis. What a turnaround compared to the body-degrading angelism of Descartes and what inspires it!

And the tidal wave of paranormological investigations (USA, Brazil, USSR) proves that the paranormal is beginning to gain civil rights. One point should be emphasized: Freud attempted to reduce paranormal phenomena to mere instinctual-unconscious, mere psychic phenomena (one thinks of *Traum und Occultismus*, (Dream and occultism), in *Vorlesungen in die Psychoanalyse und Neue Folge der Vorlesungen* (Lectures in Psychoanalysis and New Series of Lectures), (1932/1933), Frankfurt a.M., 1970, S. 472/495): such a thing testifies to ignorance and unfamiliarity with the paranormal self (externalism), in that Freud was not sensitive enough to experience, through the instinctual surface (with its complexes etc.), the 'subtle' body and its dimensions.

In this connection reference should be made to *G. Geley, l'être subconscient*, (the subconscious being,), Paris, 1977, where indeed, via the psychic and its normal and abnormal phenomena, the 'disembodied' subtle body is shown at work. This improves psychoanalysis but does not eliminate it: where it goes too far, it is put in its place (*Freud* still shares rationalist prejudices against the paranormal, - which is clearly shown in *Traum und Okkultismus*), (Dream and occultism). - With all this, anthropological dualism or psychophysical parallelism is in need of a thorough revision!

Machine-Based Angelism and Stoa.

Descartes' ethics and his politica immediately have three maxims, according to *K. Vorländer, Phil.d. Neuz.*, 1960, S. 22:

- (i) Adhere to the religion, morals and laws of your country; adhere to the most reasonable and moderate views;
- (ii) be consistent in your actions also at the risk of error (something that is an application of Peirce's method of tenacity);
- (iii) do not lose yourself in external things and control yourself. Seneca of Cordoba (+1/+ 65) and Epiktetus (+50/+138), two late Stoics, were leaders here before Descartes. One is familiar with the body contempt of (especially the later) Stoa and its natural religion (*K. Leese, Recht u. Grenze der Natürlichen Religion*, Zurich, 1954, S. 15/28, where the concept of natural religion, from the Stoa (-300/-200) to the Enlightenment (XVIIIth century), is set forth: "With these,

1/ Disregarding the vital foundations of human existence,

2/ utterly disregarding the creative irrationality of the life of feeling and drive and therefore

3/ nature and hostility to life, the Stoa has become fatal to Western spiritual and pious history until modern times, - something from which even the churches and its theologians have not been able to escape, or not sufficiently." (o.c., 28).

One noted that, in the language of Leese, the word "nature" here

a/ designate the "vital" nature, in which body, drive, feeling, mind and the whole so-called "irrational" side of human "nature" are central, as well as

b/ individual, historicity and

c/ revelation in myth and Bible.

Only with Herder (Bückeberg time: 1771/1776) and *Shleiermacher (Reden über die Religion*, 1799) does the "other nature" in man come into its own. Yet that is Preromancy and Romanticism.

Note - L. Eley, Transzendentale Phänomenologie und Systemtheorie der Gesellschaft (Zur philosophischen Propädeutik der Sozialwisschenschaften), (Transcendental Phenomenology and Systems Theory of Society (On the Philosophical Propaedeutics of the Social Sciences)), Freiburg, 1972, - 'a work that tries to make true the inner coherence of phenomenology à la Husserl and systems theory (via the notion of 'world horizon'), is not so far from Descartes' synthesis of conscientious mechanics, although it is true that Husserl's phenomenology deepens Descartes' (introspective thinking) and that cybernetics relaxes Descartes' machine model.

An analogous remark also applies to *G.Bachelard*, *Le nouvel esprit scientifique*, (The new scientific spirit,), Paris, 1934-1, 1975-13, pp. 139/183, where it concerns a non-Cartesian epistemology: Descartes is blamed for the lack of a truly inductive method (he succeeded in explaining the world perfectly but failed to 'complicate' experience, i.e. to open it up to the corrective that new experiments which conflict with existing concepts add to the concepts).

Yet Bachelard's 'new' scientific spirit is truly rationalist, though it is a, 'rationalisme élargi', dégagé de son abstraction géométrique primitive' ('n broadened rationalism, stripped of its geometrical abstraction) (o.c., ; 66). When a rationalist like Bachelard says such a thing! Descartes is abandoned and yet again and again one works on somewhere in his mind.

The same is true of *W. Barley, The retreat to Commitment*, New York, 1962: under the pressure of irrationalism (existentialism) which claims that even the rationalist makes a 'choice' which he never quite rationally justifies, the purebred rationalist admits that both Descartes and Locke's rationalism anticipate their rational proofs instead of assuming them. Yet he holds to a rationalism that seeks its rational proofs in the future rather than in the past (as Descartes et al.)

Decision.

Martial Guéroult (1891/1976), Descartes selon l' ordre des raisons, (Descartes according to the order of reasons,), Paris, 1935, sets out Descartes differently than we have done it: structuralist (not of the linguistic type like *F. de Saussure* (1857/1913: Cours de linguistique générale, published posthumously); also not of the mathematical type like Bourbaki (1930s: Eléménts de mathématique, 1934) doch) of the philosophy-historical type (therein related to Foucault as 'archaeologist'), he assumes that real philosophy is 'systematic', d.i. a coherent whole of 'exposition' (discursus, 'discours', i.e. direct and indirect speech or speaking), starting axiomatically from a limited number of well-chosen postulates, with which the whole of the exposition is coherently and logically connected.

In 1951 Guérould was appointed professor of history and 'systems technology' (i.e. the unravelling of systems of thought) of philosophy at the College de France. Truth' is to be understood here in a coherence-theoretic sense, i.e. not

a/ as (existential) contact with the real situation or

b/ as (essentialist) insight into 'eternal' realities,

c/ yet, in a certain sense, historical (because interested in e.g. the concrete thinking Descartes, Leibniz and others) yet 'system(at)ological', i.e. only interested in the mutual coherence or connection of the concepts and judgements expressed by the thinker.

(i) so for Descartes:

a/ The systematic application of the methodical doubt;

b/ the readiness ('evidence') of the cogito (I think, i.e. I am aware) as the paragon once and for all of 'truth' and 'existence guarantee';

c/ the analysis of the act(s) of thought or consciousness as supported by God's veracity (since God, unlike my senses, my imagination, or up to a deceiving demon, cannot deceive me when he puts my ideas, i.e., contents of consciousness, in me as creator).

Now Guéroult rightly observes that Descartes is making a logical leap here: only God's in-creating truthfulness guarantees the fact that my ideas concerning reality "outside" my consciousness correspond to that reality (given the concencialistic closure of my interiority to the so-called "outside world").

(ii) Not so Spinoza: instead of three substances, one full, God, and two relative, thought (consciousness) and body (extension), as Descartes, Spinoza takes as his axiomatic point of departure one single substance, God, which is at the same time (pantheistically) nature and spirit (body and consciousness), the non-godly nature and spirit included in it. Thus, the 'coherent truth of concept' so coveted by Guéroult is only there with Spinoza and the latter is really a 'philosopher', i.e. a thinker in the modernist style. Seen this way, only modernism is 'coherent'. Which is Guérould's personal axiom.

Hw 94

(I)a. The little Cartesians.

We have already mentioned one, B. Bekker: there are others in Holland, in France, elsewhere in Europe; just to mention 'n *Arnauld* (+1694: *Logique ou l' art de penser* (*Logique de Port-Royal*)) 'n *Nicole* (+1695), acquaintances of Pascal.

(I)b. The great Cartesians.

Dualism especially splits them among themselves.

Benedict Spinoza (or Despinoza), a Jew (1632/1677).

The synagogue expelled him for reasons of his far-reaching liberality. In 1670 he published, unnamed, *Tractatus theologico-politicus*: the liberal inquiry is basic; applied to the Bible, Spinoza concludes that the inspiration and prophecy of the biblical writers and the miracle in Scripture must be interpreted purely liberal-rationalist. Main work: *Ethica more geometrico demonstrata* (Ethics proven by geometry). As mentioned above, Descartes' dualism is unacceptable to Spinoza: there is one substance (= monism: there is only one being), God; this has an infinite number of 'attributes' (being properties), of which humans know two, thinking consciousness and material extension.

Through modification (mode-making, being-mode-making) the divine thinking substance becomes mind and will; through modification the divine physicality becomes movement and rest. If God is the natura naturans (nature-producing nature), then those modes (modifications) are in the natura naturata (nature produced as nature), - a distinction that will long live on, including in later natural philosophy.

Influence on

- (i) the rationalist, i.e. secularizing Biblical criticism (up to and including the Entmythologisierrung à la Bultmann of our day),
 - (ii) Herder and Goethe, Schleiermacher and Shelling, also Hegel,
 - (ii) the psychophysical parallelists.

Gottfr. Wilh. Leibniz (1646/1716),

An exceptionally successful and versatile figure, who, instead of the monistic solution of Spinoza, advocates the pluralistic interpretation of Descartes' dualism:

a/ The presence of attraction and repulsion, of heat and light in bodies proves that they are more than slow(inert) mechanical matter (order and life in the body world transcends the mechanical level);

b/ the presence of thousands of small perceptions, which, being present in our soul, yet escape our consciousness; the fact of dreamless sleep in the soul, prove that the thinking soul is more than mere consciousness.

Compared to Spinoza's monism Leibniz departs from the fact that all bodies in their deepest essence mount an effort, a force, a power (Leibniz' dynamism) which is material in its physical effects, but immaterial in its essence (// Plotinus, G. Bruno (supra pp. 56/57)). In this Leibniz tends towards something similar to Spinoza's omnipresent 'substance' (= God) (God in the bodies).

But a/ the spirits act on their own initiative, conscious as they are of their own responsibility;

- (b) each body offers resistance to all other bodies (and is therefore a separate force): 1/ So there is an immaterial force at work in all bodies:
- 2/ Each body is 'an active center in itself, separated and, in each body, is 'a bundle of 'primitive forces', called monads, which, as the mathematical points, have no extensiveness and, as the physical points, are objective realities. Leibniz calls them 'metaphysical points', 'points of substance', 'formal points', 'substantial forms' to underline their separate independence. This is pluralism; a plant, an animal for example, is not a monad, but a bundle of monads, so that one monad, the ruling one, constitutes the 'soul' of plant, animal or human, while the serving monads fix themselves around that soul monad and constitute its body.

Furthermore, there is Leibniz's perspectivism: although each monad is closed off from the rest of the universe, yet it is a microcosm, a universe (image) in miniature, representing the universe, from its perspective.

This is a straightforward occultist concept (cf. Paracelsus (1493/1541), the genius physician (supra pp. 57/58), who makes the terms "macrocosm" and "microcosm" commonplace (and which in themselves are ancient, at least latent in all archaicsensitive circles, as a basic insight) and of "archeüs" (from the Greek "archaios", concerning a primal principle), i.e. a spiritual principle (or rather: spiritual-subtle principle), present in living beings, - with which he foreshadows the effort and force dynamism of Leibniz).

In order to break through the conscientialism (idealism, subjectivism) with regard to the truthfulness of our "ideas" (contents of consciousness), Descartes made the leap to God's creative truthfulness; Leibniz that to the harmonia praestabilita, the preestablished harmony, laid down by God in our senses so that the sensory objects correspond to it perfectly (even if our senses reach them only indirectly: mediatism in perception!).

Influence: Leibniz had influence on

- (i) Chr. Wolff, the great German Aufklärer (XVIIIth century),
- (ii) J. Fr. Herbart, the pedagogue, B. Bolzano, the logician and mathematician (and along there to: Fr. Brentano, Edm. Husserl (the intentional phenomenologist)), H. Lotze and G.Teichmüller, the theoretical thinkers, the logisticians (A. de Morgan, G.Boole, E. Schroeder, G. Frege, G. Peano, A.N. Whithead, B. Russell et al. and along there: the Neo-Positivism (M. Schlick, H. Reichenbach, Ph. Frank R. Carnap)) in the XIX-th and XX-th centuries.

The occasionalists.

'Occasionalism' is the mystical assertion that creatures have no causality of their own, i.e. actually never act and cause themselves, but are merely occasional causes for God.

After all, God is the only (monistic and pantheistic tenor) cause in the universe in the real sense of that word. One sees the similarity to Spinoza 's monism, which assumed only one substance). Applied to Cartesian dualism and subjectivism, occasionalism asserts

- (a) that the creatures are temporary instruments in God's action (A. Geulincx, 'n Antwerpenaar (1625/1669) and others) or
- **b)** that they are pure conditions of God's action (N.Malebranche, 'n Oratorian (1638/1715), who claims that, on the occasion of the sensory data, we turn our attention to God (prayer), in whose being we behold the ideas (1) in an earthly way and (2) not ready, ideas which are the epitome of things on earth (or the causes of earthly things (according to G. Gioberti (1801/1852) et al.)

The Malebranchian interpretation of occasionalism is also called 'ontologism': God as the 'primum ontologicum' (the first being in the ontological field) is also the first known ('primum logicum', the logically first known), in which we know the rest, the finite.

The ontologists confuse universal (better: transcendental, all-encompassing) being with God's being (God is 'a being among the being, even though he is the creating being: being and creating being do not simply coincide).

nfluence: in mystical circles - one thinks of Descartes' influence by Augustinism with its God-and-the-soul-innerness - Occidentalism has had quite an influence until the XIXth century.

(II) *Thomas Hobbes* (1588/1679).

(A) Starting point is Fr. Bacon's separation of scientific philosophy from unscientific metaphysics. Cf. above pp. 39/40 (ideology critique and science classification especially).

Consequence: in England rationalism is immeasurably physical and empirical-experimental, with as its central idea the connection between cause and effect (hence causal induction,-subject to further discussion). The English bourgeoisie unfolds in the wake of the triumphant scienticising (i.e., with scientia, positive science) rationalism.

(B) Yet Hobbes is not a Baconian without more:

- a) after all, he spent thirteen years in France (where he underwent Cartesian influence: (i) there he learned to build up a metaphysics, albeit a materialistic one, and (ii) he learned to turn on syllogism (and deduction), among other things and especially in its mathematical form in his empiricism). Therefore one can also classify him with the Cartesians.
- **(b)** Yet the gap with Descartes' style of thought seems greater than the similarity with it. As *H. Arvon, L 'athéisme*, Paris, 1967, p. 37, mentions, Hobbes underwent in France the influence of the Libertines, see above p.58/59 (Libertines, i.e. blasphemous Epicureans (La Mothe le Vayer, Gassendi, Bayle); He is the friend of Gassendi, whose mockery of religious matters he shares -- well, the empiricism of Gassendi and the skepticism of Bayle contend with Descartes.

The question arises why or how 'an apparent believer like Father Mersenne (+1648), friend of Descartes, mathesis supporter, at the same time:

- 1) friend is of Gassendi, Libertine, atomistic physicist, hostile to Descartes' rationalism understood as innatism, celebrated in the XVIIIth century, antimetaphysician,
- **2**) as well as friend of Hobbes, -- Hobbes who, when seriously ill, received a visit from Father Mersenne S.J., who urged him to reconcile with the Catholic Church and received from Hobbes the reply, "Canst thou not talk to me of more pleasant things? When did ye last see Gassendi?". The answer gives o.i. *F.A. Lange, Geschichte des Materialismus*, I (*Gesch. d. Mat. bis auf Kant*), Leipzig, 1666¹, S. 245/255, where he speaks of the doctrine of double truth, as it, in full thirteenth (yes, thirteenth)) century, was advocated,-attributed, apparently without historically sound foundation to Averroës of Cordova (1126/1198; see above p. 12, where he is briefly mentioned).

The double-truth proponents claimed that two assertions, e.g. the mortality of the soul (philosophically defended by P. Pomponatius (= Pomponazzi) ((in full Renaissance time (he died in 1524))) in his booklet on the immortality of the soul (1516) and, in addition, the immortality of the soul (theologically defended, at least apparently, by the same Pomponatius)), could be confirmed at the same time by one and the same thinker!

Lange quotes from that double-truth system, rightly or wrongly called Averroism (see above p. 14 (Siger van Brabant (1235/1284) and others), p. 16 (Late Averroism)), an example as early as in 1247.

A professor in Paris, Johannes de Brescain, condemned by his bishop for heretical theses, defended himself by saying that he had only meant the theses in question as philosophical, but certainly never as theological. Those double advocates of the truth who thus provided themselves, in the fullness of Scholastic times, with freedom of thought, indeed liberty of thought, were not only in France, but also in Italy (Machiavelli e.g. claims that the sovereign should support religion in any case, "even when he considers it untrue". (Lange, o.-c., S. 252, cf. above pp. 42/51)) and in England (o.c., 248).

This is the true background of the liberality of 'n Mersenne, 'n Descartes, 'n Hobbes, 'n Gassendi and so many others.- Whether or not explicitly claimed by Averroës, it is latent in his views on the interpretation of the Koran, the holy book of the Islam believers: Averroës, after all, favors a merely allegorical interpretation of the Qur'an and not a realistic one. Compare under that point of view

- **a)** Spinoza (p. 94 (on inspiration and miracle, according to *Renan* (1823/1892), *Vie de Jésus* (1863), the two arteries of realistic Gospel interpretation),
- **b)** as well as p. 5/7 (on the 'historical' character of the Gospels). Now this is called 'hermeneutics' of the Gospels.

After this apparent detour, we can listen to Hobbes, with Gassendi (according to Lange, o.c., 246) the first systematic materialists in Europe.

Knowledge-theoretically, Hobbes honors the two-truth system:

- a) there is theology, whose objects are objects of faith, e.g. pure spirits (souls of the dead, angels, God) and, apart from these pure spirits, conceived very 'angelically' since Thomas Aquinas and Descartes (see above p. 89/90 on dualism), there is indeed no object of 'faith' and thus of 'theology', which is a knowledge of the immaterial; for Hobbes claims that immaterial things are 'unknowable'. 89/90 on dualism), there is indeed no object of "faith" and thus of "theology" which is a knowing of the immaterial; for Hobbes claims that immaterial things are "unthinkable", i.e. impossible to "think" (!);
- b) there are science and philosophy (which here is clearly taken to be theology-foreign, yes, theology-hostile): for 'to philosophize' is precisely 'to think' and proper thinking is to join one notion (concept) to another or conversely to separate them ('This is white' or 'This is not white'); Hobbes interprets this joining or separation as mathesis: to join is to add; to separate is to subtract; In other words, to judge by thought is to calculate (to proceed by counting); to think correctly is therefore to bring together what belongs together and to distinguish what differs.

But now listen carefully to the conclusion Hobbes draws from this: 'philosophy' which 'calculates' can only have as its object that which is composable or disassemblable, namely the bodies. One sees here the Kartesian at work, the dualist:

- (a) for theology the spirits (purely immaterial),
- **(b)** for 'philosophy' the bodies. Dualism! But now epistemologically implemented in the spirit of the two-truth system briefly outlined above.

Classification; der philosophy.

Classical Greek does the classification: after all, there are two kinds of 'bodies',

- (a) the natural (physical) and
- **b)** the artificial (artificial), i.e. the ethical-social. Consequence: philosophy decays into two parts: (i) *philosophia naturalis*, natural philosophy (= logic and ontology; mathematics and physics); (ii) *philosophia civilis* (= civil philosophy: morals and politics). Both branches, physical and ethical-political philosophy, are experimental sciences, in the spirit of Bacon:
 - (a) its object are bodies;
 - **(b)** its tool is external and internal perception:
 - (c) outside of observational science, after all, there is no real knowledge!

This exclusive statement is significant for the science of angelic objects, theology. It evidently has no 'cognitive' or knowledge value, but only faith value: what is faith then, if it has no cognitive value?

Rightly says *A. Weber, Hist. d. l. phil. europ.*, p. 275: Hobbes was ahead of criticism (Hume, Kant), materialism and positivism". Which Lange (o.c.) and *H. Arvon, L'athéisme*, Paris, 1967, p.37, also confirm.

Indeed, Hobbes' definitions of philosophy and religion do not lie:

Philosophy' is the knowledge of phenomena, understood as effects or consequences of assumed (prolepsis, lemma) causes (causalism; cf. Baconsian concept of induction); it is, in reverse, knowledge of causes through their effects or effects by means of correct (i.e. It is a rationalism, but causally oriented; the aim of "philosophy" is therefore to anticipate the effects and thus to place them in the service of practical-technical life, which with Hobbes is primarily the political life of the absolutist state; this could be called a political effectivism; "nature" and "body" are identical;

Consequence: 'natural philosophy' has since then remained, in the Anglo-Saxon countries, the experimental physical of natural or artificial bodies; which belonged in the efficiency-oriented England and America,

'Religion' lapses into two modalities: the fear of invisible powers (one senses at work what E. Jünger says about the walled citizen) either that these have been invented or that through tradition they have acquired 'a sacred aura' - notice that Hobbes does not say a word about the knowledge value or about the realism concerning religion, (a) that fear is therefore 'religion' (in the typical Hobbesian sense now), if it is state-established and

(b) it is superstition, if not established by the state.

One can hear the man at work who once claimed that 'miracles' are pills that one cannot nibble but must swallow at once!

The political conclusion can be read in *Leviathan* (or the Matter, Forme and Power of a Commonwealth Ecclesiastical and civil) (1651).

- (1) the body experience is the only knowledge base;
- (2) man does not possess innate ideas (anti-Kartesianism)
- (a) consequence: the "spirits" (God, angels, souls), excluded from any scientific-wisdom investigation, are by necessity excluded from this world;
- **b**) second consequence: the power of the priests cannot demand obedience in the civil field. Only Leviathan, i.e., the absolute state power, whether or not embodied in a monarch, is authorized to demand obedience (and absolute obedience at that). The state religion is the only religion, the product of reason. One can see that rationalism led very early to free thinking oppressive systems!

Paradox: thinking freely, yes, thinking freely, one comes to the denial of all real freedom, including the freedom of thought! The rationalism of the 17th century is so interwoven with the aristocratic-political atmosphere that it puts its "rational" point of departure at risk! Kop(p)ernicus for astronomy, Galilei for mathematical physics, Harvey for the science of the human body, - Kepler, Gassendi and Mersenne all three for the summary view of nature, - these are what Hobbes considers to be sound scientific beginnings for his time.

For him lies the task set aside (one thinks of his *De Cive* (about the citizen)) to work out the 'civil philosophy' scientifically. In this way he wants to banish from civil life the phantom ('phantasma quodam', he says, a phantom of the imagination) or, even more caustically, following Apollonios of Tuana's history of incantations, the empusa (bloodsucker) called theology:

"This specter, this phantom (i.e. theology), according to Hobbes, can be exorcised by nothing better than the introduction of a state religion which displaces the dogmata of private men, and by the fact that religion is based on the Holy Scriptures. (Hobbes lives under the pressure of Bible-loving England and evidently conceals his true opinion, because scripture is for him an illusory form of knowledge; think of his opinion of the miracle, one of the essential elements of scripture). whereas 'philosophy' is based on natural reason". (*Lange, Gesch. d. Mat.*, Reclam, I, S. 324).

So much for the basic position of this first purely materialist rationalist. Now some detailed questions, chosen for their after-effects or general scope.

The transition from spatial or purely mechanical motion

- (a) to the sensory experience and
- **(b)** to the representations of the reasoning mind (both, sense and mind, are rendered in modern rationalism by the word 'thinking', stream of consciousness (correctly translated)) is the key problem both for the innatists (Descartes, Spinoza, Leibniz) and for the empiricists, better sens(ual)ists the senses, both the inner sense and the external senses, are the supply of 'ideas'- contents of consciousness for the empiricists (Hobbes, Locke, Hume)
- (A) For the innatists, we have checked the three great detours: Descartes (God's inscriptive veracity), Spinoza (total identification of God and thinking self), Leibniz (the monad which, as microcosm, essentially contains the macrocosm).

(B) Looking now at the first empiricist.

First of all he excludes Demokritos' eidola doctrine (eidolon, imago, image): these "simulacra (= eidola) rerum" (of things outside consciousness), according to Hobbes, are later, in the Middle Ages the "species sensibiles", i.e. the conceptions which enter consciousness through the senses, and also the "species intelligibiles", the conceptions of the senses elevated by the intellect to generally valid representations, as understood by scholastics (in the line of Aristotle's theory of abstraction, i.e. the theory of the generalization of the senses).i. the sense-images elevated by the mind to universally valid representations, as they were conceived by scholastics (in the line of Aristotle's theory of abstraction, i. e. theory of generalization of purely singular or private conceptions). It is known that Demokritos, apparently a clairvoyant materialist, considered the emanations of a fluid or "subtle" nature,