

Systems of Logic

	SYNCHRONIC	DIACHRONIC
MACRO/UNIVERSAL	Systematic theology	Metanarrative theology
MICRO/PARTICULARIST	Contextualized theology	Narrative theology

[Meta narrative = grand narrative made up of many narratives interlaced]

I. ABSTRACT ANALYTICAL LOGIC

1. Goal: GUT. A comprehensive description of unchanging universal realities:
 - * assumed to be acultural and ahistorical--universal. Eg. parallel lines don't meet ==straight lines with points are equa-distant]
 - * move toward higher levels of abstraction and generalization
 - deconstructionist [foundationalist]: break all realities down to basic building blocks == atoms (chemistry), individuals (sociology), basic units.
 - classificatory: develop elaborate taxonomies of fundamental units. Develop outlines (Crosby on outlining)
 - constructionalist: use these to build a single edifice on solid foundations [atoms--molecules--compounds--etc.]
2. Formal logical procedures: focus on rational procedures and system
 - 2.1 Algorithmic logic: Aristotilian, Al Horisme
 - binary, algorithmic -- accounting
 - Cantorian sets: focus on uniform, well bounded sets in which boundary determines the set
 - law of the excluded middle. Euclidian geometry: binary sets and boundaries
 - one possible answer: eg. $2 \times 2 = 4$. Barometer, building height, etc.
 - propositions: meaning-involved expressions waiting to be pinned down to who, where, and when before they have a definite truth-value.
 - generative: algorithms provide right solution.
 - 2.2 Fuzzy sets and fuzzy logic:
 - nonCantorian algebra, non-Euclidian geometries
3. Objectivity:
 - observer is outside the system, and detached.
 - separate cognition from affectivity and valuation.

- focus primarily on knowing the truth as facts
- observational: gain data primarily from empirical data, priority sight
- anthropology: etic analysis

- Peirce on verification theory of meaning.

4. Synchronic analysis:

- focuses on unchanging universals

5. Mechanistic:

- search for universal **laws**. Uses these to draw deductions.
- analogy of the French laws system: Napolionic code applied
- deterministic: one right solution
- rejects teleological explanations.
- * problem with applying universals to particular settings. Division of pure/applied.

II. CONCRETE FUNCTIONAL LOGIC

1. Focus on Particularity of history, society, culture, person.

- context specific:

2. Wisdom: focus on the rational person

- algorithmic logic + intuition, gestalt, whole picture, assessment, judgment calls, etc
- several possible answers: ?X?=4. barometer. problem solving
- adds values, emotions, involvement; objective and subjective
- dialogue to reach truth, community hermeneutics
- cognitive/affective/evaluative combined: speak the truth in love
- etic and emic (hermeneutical--symbols, worldviews, logics etc).
- ill: British and American legal system based on cases not legal formulations: Use inference, parallels, precedent.
- catch life in the flow, not detached
- observer is part of the picture and affects the findings. Must know where the observer is and where he/she comes from. Personal testimony, witness.
- focus on principles, not laws.

3. Tropological analysis.

- analogical categories: Max Weber's ideal types in which a type has many characteristics, and a member belongs to the degree it share some or most of these characteristics.
- "In spelling out these similarities, or analogies, I have been translating the metaphor into literal speech. But this does not exhaust the metaphor. For such translation can never be complete and definitive, both because there is no fixed boundary to the range of similarities that may occur to different people, and because these similarities can

activate an indefinite range of varied associations and feelings. There is an ineliminable and indefinable auroof meaning to metaphor. A metaphor's central thrust can be literally translated, but its ramifying overtones and emotional clor are variable and change and thus are not translatable without remainder into a definitive list of literal propositions. The use of metahpor is accordingly a different kind of speech-act from the listing of identifiable similarities. John Hick"

- tropes: metaphor, metonymy, irony, synecdoche, hyperbole, simili, idiom and meiosis. Metaphor is a use of speech in which the speaker-meaning differs from the dictionary meaning. The meaning of metaphor, though difficult to locate, occurs when there is a 'transfer of meaning.' One term is illuminated by attiching it some of the associations of another, so se speak of one thing in terms suggestive of another. Metaphorical meaning is thus generated by the interaction of two sets of ideas.
- Ayer, A. J. 1952. Language, Truth and Logic. 2nd ed. N.Y.: Dover Publications.
- Sherry, Patrick. Portraying Analogy.
- Swinburne, Richard. 1992. Revelation: From Metaphor to Analogy. Oxford: Clarendon Press.
- Soskice, Janet Martin. 1985. Metaphor and Religious Language. Oxford: Clarendon Press.
- Schroeder, Manfred. 1991. Fractals, Chaos , Power Laws. NY>: W. H. Freeman and Co.

4. Goal: Function: models of in order to be models for living.
 - accepts teleological explanations

5. Organic and relational:
 - hermeneutical, teleological, emic,

6. Diachronic: vs Synchronic: narrative and grand narrative vs structure and system



Further Notes

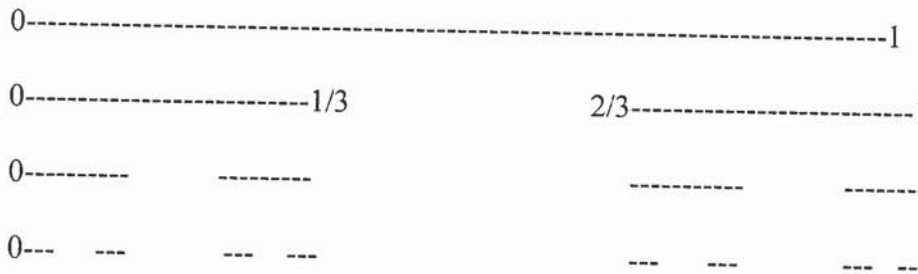
- use of the concept of 'field'.
 = the presence of God determines the effects of the field
 = the worship field is nonlinear in nature
 = symbols are invisible realities made visible.
- Einstein said, as far as the laws of mathematics refer to reality, they are not certina; and as far as they are certain, they do not refer to reality. Schroder 1991, 139
- John von Newman: Truth is much to complicated to allow anything but approximations. Schroeder 1991, 372.

Fractals

- chaos is apreiodic long-term behavior in a deterministic system that exhibits sensitive dependence on intial conditions (Steve Strogatz 1994, Nopnlinear Dynamics and Chaos).

Reading: Addison-Wesley. 323)

- fractals are *self-similar* when they contain smaller copies of themselves at all scales. An example is the Cantor Set. Iterations of self-similar fractals can reproduce exactly the original object.
- fractals are complex geometric shapes with fine structure at arbitrarily small scales. Example of a simple fractal, the Cantor Set.



1. Start with interval $S = [0, 1]$
2. Remove middle third, this produces S_1
3. Remove middle thirds of two intervals to produce S_2 and so on.
4. The limiting set $C = S_{\infty}$ is the Cantor Set

Fractal characteristics of Cantor Set C_{∞}

1. C has a structure at arbitrarily small scales
2. C is self-similar. It contains smaller copies of itself at all scales
3. the dimension of C is not an integer [minimum number of coordinates needed to describe every point in the set]

4. Taxonomy:

Science and taxonomy go hand in glove. In fact, implicit in every taxonomy is a theory of the nature of the events or organisms being classified. Yet a review of the historical development of taxonomy of living things reveals that, paradoxically, the more Western man classifies, the less useful are his classificatory systems. Folk taxonomies and scientific taxonomies are examples of high- and low-context systems, respectively. For example, in a recent article on the subject the authors state,

... the taxonomic system we use *appears* to communicate a great deal about the organism being discussed, whereas in fact it communicates very little. Since, in the vast majority of instances, only the describer has seen the named organism, no one with whom he is communicating share his understanding of it.

In contrast, folk taxonomies perform entirely different functions and are designed not for information retrieval but for communicating *about* organisms with those who already know culturally significant properties of the organisms being discussed. The authors further state:

In dealing with the vast numbers of organisms that exist, we tend to overemphasize the process of classification and the decisions it involves at the expense of information *about* the organisms. . . {italics added}. (Hall 1977. *Beyond Culture*. p. 122.)

The classification system is an excellent example of how the majority of Western peoples have been trained to think. Since the days of Linnaeus, the system has been highly respected and occupies a prestigious niche in the edifice of Western thought. . . the result has been, however, that whichever way we Westerners turn, we find ourselves deeply preoccupied with specifics . . . to the exclusion of everything else. . . . Where do we go for the over-view? Who is putting things together? {Hall 1977, 123}

- this illustrates the *abstract analytical* process at work. But the abstract analytical approach leaves us with a problem of relevance. It leads to the Apollonian personality of one who needs to have clear plans, high control and run by the rules.

Classification led to alphabetization and numerical sequences and outlining. Eg. chapters and verses in the Bible, encyclopedias by alphabet, outline by number. pp. 62-66. Crosby.

Abstract: detached from life, hard to find relevance in every day life

Universal: overlooks particularity of life.

Analytical: breaks things up to examine the parts. Cannot put them back together. Ill. dissecting a butterfly.

Quantification: see Crosby 1997. Precise, well formed sets, geometry, algebra, math.
- outlining, alphabetizing, classifying, syllogistic logic, mathematical formulas. statistics, etc.

Crosby, Alfred W. 1997. The Measure of Reality: Quantification and Western Society, 1250-1600.

Cambridge: Cambridge Univ. Press.

Hall, Edward T. 1977. Beyond Culture. Garden City, NY: Anchor Books.

The search for a comprehensive system based on algorithmic logic implies that humans can grasp the fullness of truth with clarity. It leaves little room for the ambiguities of life, the mysteries that transcend human comprehension, and the wisdom that can deal with the contradictions and paradoxes of a rapidly changing world.¹ It is built on linear logic acting on well formed

¹ Larry Laudin (1996) argues that positivism sought to build comprehensive systems of certain knowledge on the basis of algorithmic logic, but that current studies show, on the basis of this logic, that these systems are all under substantiated. The instrumentalism that is currently replacing positivism has no new logic to offer, and, therefore, ends up in relativism. Laudin argues that we need to return to a broader concept of 'wisdom' which enables us to make valid

categories, and cannot deal with the 'fuzzy' sets and 'fuzzy logic' of human experiences (Zadeh 1965). It tends to be deterministic and reductionist in nature.

decisions regarding truth on the basis of partial and oftentimes conflicting findings.