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## The Chinese Challenge :: 中国挑战

"The Chinese Challenge"-Teamblog is opening up a discussion about a possible new rationality hidden in the Chinese writing. The main question is: What can we learn from China that China is not teaching us? It is proposed that a study of polycontextural logic and morphogramatics could be helpful to discover this new kind of rationality. Topics of polycontexturality, morphogramatics and trans-computation are presented at my website and can be discussed at the Blog. Start with the "Pamphlet".

### Contributors

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SUNDAY, OCTOBER 22, 2006

### Liu Hsieh's Grammatology

## Again, hallucinating phono-logocentrism in Chinese and Western traditions

First, Han-Liang Chan's reading of Liu Hsieh

Second, my comments on Liu Hsieh

Third, Florian Coulmas' Writing Systems

(For technical reasons, again)

## Liu Hsieh (465 – 522)

*When the mind is at  
work,  
speech is uttered.*

*When speech is uttered,  
writing is produced.*

*The Tao inspires writing  
and  
Writing illuminates the  
Tao.*

*What in mind is idea  
when expressed in speech  
is poetry.*

*Isn't this what we are  
doing  
when dashing off writing  
to record reality?*

*Writing originated  
when drawing of bird  
trace  
replaced string knitting.*

**P'ien Wen**

*"The revolt against imitative writing was also expressed in a 5th-century style called "pure conversation", an intellectual discussion on lofty matters. Some of these were recorded in a collection of anecdotes entitled 'Sayings of the World'. In the 6th century the first book of literary criticism, 'Carving of the Literary Dragon', was published by Liu Hsieh (465-522).*

*It was written in the p'ien wen, or parallel prose, style."*

Liu Hsieh's style and strategy of writing, the P'ien-wen, has an antithetic, parallel and chiasmic structure which easily can be seen in the "poetic" presentation of the text.

### **Han-Liang Chan's Hallucinations about Liu Hsieh**

"However, this kind of mimesis is not different from what traditional Chinese scholars believe. The Chinese version of logocentrism can be glimpsed from the following statements of the sixth-century Liu Hsieh, the first and probably the only systematic literary critic in classical and medieval China.

*When the mind is at work, speech is uttered.  
When speech is uttered, writing is produced.  
The Tao inspires writing and writing illuminates the Tao. What in mind is idea when expressed in speech is poetry. Isn't this what we are doing when dashing off writing to record reality?  
Writing originated when drawing of bird trace replaced string knitting. (13-17)*

These statements from Liu Hsieh, which have been so influential, represent different, and sometimes conflicting, theories regarding the origin of writing and its relation to speech. But they share the same belief in an ultimate, transcendental, undifferentiated, and unmediated reality, be it Tao or nature. In some sense, the metaphysics behind such statements is indeed naive and can be deconstructed by a rereading of the Chinese written character. But there is no fundamental difference between it and the Western logocentric metaphysics, which Derrida sets out to dismantle. There is no reason why Derrida's deconstruction of Western mimesis cannot be done to its Chinese counterpart. Thus I am tempted to ask:

*isn't Derrida, like Leibniz before him, suffering from the same "European hallucination"*

that China is of necessity exempt from logocentrism?  
[...] Under the tyranny of logocentrism, writing is

rendered as secondary and subordinate. In Aristotle's celebrated phrasing which opens  
On Interpretation:

*"Spoken words are the symbols of mental experience and written words are the symbols of spoken words" (qtd. in Gelb, 13).*

This formulation, which Derrida criticizes in *The Margins of Philosophy* as psychologism, is almost a verbatim paraphrase of Liu Hsieh:

*"When the mind is at work, speech is uttered.  
When speech is uttered, writing is produced."*

Thus in both China and the West, at least in the Aristotelian and Confucian traditions, the category of writing is inscribed only in relation to speech and to the subject of writing.

It is, as Derrida puts it in *The End of the Book and the Beginning of Writing*, "pneumatological" rather than "grammatological" writing (1976, 17). This primacy granted to speech is open to deconstruction. Therefore, Derrida proposes that writing be shifted to the space of arche-writing (trace, *différance*)."

## **Complexity and Chiasm of Speech/Script/World**

*"When the mind is at work, speech is uttered.  
When speech is uttered, writing is produced."*

This, obviously sounds quite familiar, i.e. Aristotelian. But the holistic principle of Chinese thinking demands to read the text or paragraph as a whole. I have not to be a sinologist to perceive a fundamental difference between Platonian/Aristotelian phonologocentrism and Liu Hsieh's conception.

The Aristotelian concept is hierarchic:

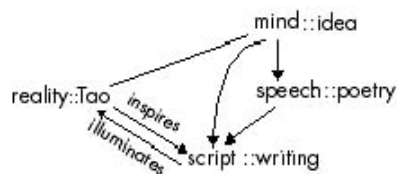
**things -> soul -> spoken word -> written word.**

*"Words spoken are symbols of affections or impressions of the soul; written words are symbols of words spoken. And just as letters are not the same for all men, sounds are not the same either, although the affections directly expressed by these indications are the same for everyone, as are the things of which these impressions are images." Aristotle*

### Micro-structure of the asymmetry

A more detailed reading of Liu Hsieh shows that the conception he describes is different in, at least, four ways:

1. it is *circular* : "The Tao inspires writing and writing illuminates the Tao.",
2. it is *co-creative*: "writing illuminates the Tao" and
3. it is *parallel*:  
"What in mind is  
idea when  
expressed in  
speech is  
poetry./writing to  
record reality"
4. it is *evocative*: "Isn't this what we are doing when dashing off writing to record reality?"



These four properties are corresponding to the general ontology or world-view of Chinese thinking:

1. *dynamism*: things in the world are changing (circular, chiasitic, co-creative)
2. *grid and networking*: things are complex and interrelated (parallelism, concurrency).
3. *holism*: situational, all parts have to be considered which are constituting a pattern.
4. *interactional/reflectional*: the text involves a reader who is addressed in a persuasive, evocative mode. But it is also self-referential: "what we are doing?"  
The circularity is chiasitic, not simply repetitive.

Between "*writing illuminates*" and "*Tao inspires writing*" exists a qualitative difference depending on the two involved positions: Tao, writer. And "idea in mind" vs. "poetry in speech" vs. "dashing off writing/recording reality".

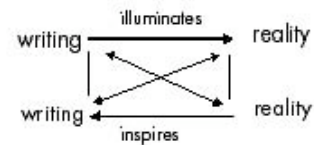
There is also a historical comment involved.

As a result we can resume that the Chinese model of language is containing the classic Western model as a part of its complexity, and it seems that the Chinese model is more close to (post)modern scientific models of language than to Western philosophical models of language.

Chiasm of writing

Writing as illuminating (acting),

Writing as being inspired (conceiving),  
 Reality as inspiring,  
 Reality as being illuminated.  
 Reality as reality  
 Writing as writing  
 Writing as counter-part to  
 reality  
 Reality as counter-part to writing.



### Patterns of distribution

It doesn't seem a too wild speculation to mention that the Chinese characters are placed in a way that they configure as a pattern. In such a configuration the intertextuality of the characters is of importance. For the eye, interconnections between the characters are perceivable. It is not depending on the listening of the linear ordered words and sentences but on the visual collection of the placed glyphs. Such situations are well known, also in the West, in modern poetry. A further analysis would have to involve the Chinese writing in concreto, with its glyphs and the "etymology" of the glyphs.

Han-Liang Chan's statement:

*"But they share the same belief in an ultimate, transcendental, undifferentiated, and unmediated reality, be it Tao or nature."*

seems not to be confirmed by the co-creative interaction of writing in relation to the Tao (reality). The Tao is changing under the action of writing, thus it is not in a simple metaphysical way *"ultimate, transcendental, undifferentiated, and unmediated reality"*.

Hence, the situation is unorthodoxically complex.

Han-Liang Chan's question

*"isn't Derrida, [...], suffering from the same "Europaen hallucination" that China is of necessity exempt from logocentrism?"*

Has no easy answer. As far as logocentrism can be seen as a part of the Chinese model, the answer is yes. As far as the Chinese model is taken in its full complexity, the answer is no.

Again, Han-Liang Chan's interpretation may be in the tradition of the historic understanding of the Chinese

model, but this interpretation is not confirmed by Liu Hsieh's text.

Thus, the translation of Tao might then not be logos (ultimate, absolute) but change.

### **Florian Coulmas' Confirmation**

Interestingly, I found a direct confirmation of my "laicist" reading of Liu Hsieh.

The author of "*Writing Systems*" Florian Coulmas writes:

"It bears resemblance to Aristotle's, but upon closer inspection also differs in important respects. In his celebrated essay '*Carving of the Literary Dragon*' writer and philosopher Liu Hsieh (465–522) states:

*"When the mind is at work, speech is uttered.  
When speech is uttered, writing is produced.  
The Tao inspires writing and writing illuminates the Tao. What in mind is idea when expressed in speech is poetry. Isn't this what we are doing when dashing off writing to record reality?  
Writing originated when drawing of bird trace replaced string knitting."* (1983: 13–17)

This definition shares a number of elements with Aristotle's.

A mind at work is what Aristotle calls '*affections of the soul*'. It produces speech that in turn generates writing. The Tao corresponds to nature, that is, things about which ideas are formed in the mind.

However, Liu Hsieh's statement also contains an element that lacks a counterpart in Aristotle's definition. Writing is credited with a creative analytic potential:

*it illuminates the Tao.*

*Moreover, the Tao inspires writing, apparently unmediated by speech.*

An idea in the mind is expressed in speech, but also in writing that is employed 'to record reality'.

While Aristotle unambiguously places speech between ideas and written words, Liu Hsieh seems to concede the possibility that ideas are expressed poetically in speech or in writing, where the relationship between the two is not necessarily unidirectional.

This does not imply that, unlike the Greek philosopher, the Chinese denied that writing was bound up with

language, but from his account of the relationship between ideas, speech and writing it cannot be concluded that he conceived of writing as a mere substitute for speech.[...]

Linguistic orthodoxy happily concurs with Ferdinand de Saussure's apodictic statement that made Aristotelian surrogationalism a cornerstone of modern linguistics:

*"Language and writing are two distinct systems of signs; the second exists for the sole purpose of representing the first. The linguistic object is not both the written and the spoken forms of words; the spoken forms alone constitute the object." (Saussure 1959: 23)*

Following this prescriptive instruction, most introductory textbooks of linguistics simply exclude the problematic of writing or make do with a cursory review of a number of writing systems in the final chapter.

Notice in passing that this is quite different in the Eastern tradition of the scientific study of language. *The Encyclopedic Dictionary of Chinese Linguistics* (1991–2), for example, treats writing systems as its first topic at great length.

A noble and widely accepted reason for ignoring writing or treating it lightly in the West is that all human languages are thought to be equal in the sense that they are expressions of the same inborn faculty of language."

## **Hidden Heterodoxy in the Hierarchy Thesis**

After all, the question of Chinese phonologocentrism has lost its innocence and simplicity; it has to be involved in a complex 'hermeneutic' and grammatological game of change with its hierarchic/heterarchic, dynamic/co-creative, direct/concurrent aspects.

It turns out to be more interesting to hallucinate on the base of proper reading.

But the Western tradition isn't as simple as described, too.

A critical reading of the original manuscripts of Plato and de Saussure confronts interpretation with some anti-traditional surprises. But we have to accept that the hierarchic model has dominated the history of western thinking and technology. It was the only paradigm with a manageable operativity. Plato's approach was too



archaic, and de Saussure's wasn't even published properly at his time. Today, the hierarchy starts with the narrative of innated basic patterns.

A similar situation to the complex model of speech and writing we will discover in the relationship between *polycontextural logic* (negative languages) and *morphogramatics*.

### **Hallucinations never end**

Leibniz was hallucinating Chinese scriptural culture, Derrida was hallucinating Chinese script, Han-Liang Chan is hallucination Liu Hsieh and Derrida, Florian Coulmas is hallucinating on hallucinations of Ferdinand de Saussure's students, Gotthard Gunther is hallucinating the Chinese asymmetry in favor of his "negative language", I am hallucinating the hallucinations of writing and reading in favor of a hallucinated Chinese Challenge.

### **Asymmetry/polycontextural logic**

From the point of view of the profound asymmetry between spoken and written Chinese language, as Gunther mentioned in his letter, we have not to go too much into further linguistic details of analysis.

However, the asymmetry is not a simple inversion of the hierarchy of spoken and written language but is involved in the complex interactivity between speech/script/world as it was suggested by the thoughts of Liu Hsieh.

It has, further more, to include script as numbers and mathematics.

In Aristotelian philosophy of language/writing there is no asymmetry between the magnitude of language and writing but a hierarchy of relevance. First is spoken language, then written language.

In the Chinese paradigm there is a complex dynamism between spoken/written language and reality.

*"That is, in holding to the ideograms, lies an unconscious insight of a massive asymmetry between spoken and written language. It is the written language, on which a main culture rests. It possesses an identity strength, which stands out clearly against the identity weakness of the spoken word." Gunther*

Gunther's conception of a "negative language"

(*polycontextural logic*) is emphasizing the asymmetry between spoken and written language in respect to formal languages. His negative language is a formal language surpassing traditional formal logic, and thus, strictly not a language but a complex

Today, the Aristotelian hierarchy is still at work in computer science and technology. It is mainly based on Viennese positivism and analytical philosophy and comes as the hierarchy of syntax, semantics and pragmatics. Thus, it has a cultural and economic impact.

The same happens for the Web. The Web is syntactically structured, based on ID numbers, organized in a central administration. The new movement, *Semantic Web*, tries to add some semantics to it. Computer science is strictly following the narrow path of formal logic.

For China, there are no epistemological barriers produced by the complex scripture to fully assimilate Western logic and scientificity. Simply because the Western hierarchic paradigm of thinking appears as a part of the holistic and heterarchic Chinese paradigm of writing and thinking.

### **Imperialism of phonetization and Unicode**

*"In spite of his own European hallucination, which can be deconstructed in and by itself, Derrida's concept of writing is existential urgency to the Chinese as users of script. Ever since the seventeenth century, the Chinese writing system has been challenged of the curious joint forces of Leibnizian admiration and Hegelian scorn.*

*Specifically, it has had to meet the continued challenge of, in Derrida's words, the imperialism of phoneticization, which has been aggravated since the Opium War by the religious, political, and technological encroachments of Western powers. This language—or more precisely, script—crisis has never been sufficiently addressed.*

*Among notable projects of language imperialism are the numerous attempts at Latinizing the*

*script and the on-going debate on the so-called "monosyllabic myth."*

*Recently, Stephen A. Tyler has proposed a postmodern ethnography by questioning the ethnographer's very medium of writing for his text and suggesting as an alternative the native's participatory voice. But I am afraid that in the case of representing China's essentially script culture, the native's "voice" has to be silenced in the first place."*

Attempts to phonetization comes in a pedagogical disguise. It would be much easier for human beings to learn Chinese if it could be reduced to an as simple system as Western alphabets. But this, again, is a Western myth as comparative studies of educational systems have shown. This trend is not aware about the Chinese history which always had the possibility to change the base, but for good reasons, didn't. Now, a new candidate is learning Chinese, our computers. And surprisingly, instead of denying the complexity of the Chinese characters to feed computers, the contrary happend. Thanks to codification, Chinese characters can be represented in Unicode. And are therefore accessible for electronic writing and printing.

### **Codification as a protection: Unicode**

Unicode provides a unique number for every character, no matter what the platform, no matter what the program, no matter what the language.

*"With the help of the four-byte coding technology, people can easily type in 70,000 characters in any computer installed with a coordinated database, Wang said, adding that the original two-byte coding could only deal with 20,000 characters.*

*The Kangxi Dictionary, a famous Chinese dictionary compiled during the reign of Kangxi Emperor of the Qing Dynasty (1644-1911), is now under the publishing process with the help of four-byte coding. The dictionary was best known for including the most rare characters in the Chinese language.*

*"Apart from its own meaning, one character*

*also embodies the culture and history of the user", Feng said, "We should better preserve and protect our Chinese characters by using advanced technology."*

Representing Chinese characters by numbers in the process of codification in Unicode is not reducing Chinese writing to the linearity of alphabetism. Alphabetism would be another kind of writing, Unicode is not another kind of writing but a codification of Chinese writing. Writing is not coding.

But nevertheless, Unicode is mapping codified characters onto the linearity of natural numbers. In Gunther's wording, it is a mapping onto a positive language, that is, onto the arithmetic of a positive language which is an uni-dimensional arithmetic. A negative language, and Gunther considered the Chinese script, because of its complexity, a historical negative language. A negative language then would ask for a pluri-dimensional arithmetics and a complex polycontextural logic. And a codification then would have an other function, it would be rather a formalization than a codification.

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posted by Rudolf | [10:48 AM](#) | [0 comments](#) | [links to this post](#)

SATURDAY, OCTOBER 21, 2006

## New Enlightenments in the Orbit?

### **1 Towards a Metaphor of Togetherness**

Time is coming that we have to learn to live together at the same place without any chances of excluding each other.

Earlier on we solved this problem of living together with the help of the operation of separation and exclusion. Nobody had to live at the exact same place as someone else. The separation of two beings has given the space and possibility for interaction and cooperation between these entities. The separation was the fundamental condition for the possibility of interaction (cooperation, communication, co-creation, etc.).

Now it seems that we have reached the point that we have to develop a concept of living together in which we have to take place together simultaneously at the exact same place.

It will turn out that this way of living together is prior to any separation and therefore to any form of interaction and cooperation.

In classical terms two objects must be identical if they are not different. They are different if it is possible to separate them.

How could togetherness be thought and conceptualized without the assumptions of identity and distinctness and the procedures of identification and separation?

How could this be possible? First of all, it isn't possible at all on the premises of the traditional concepts of place, space, object, time, state, separation and interaction. The reason is obvious, all these concepts are fundamentally rooted in the ontological and logical principle of identity.

In technical terms, how could it be possible that two different states of a computation could occupy the very same place in the computing space of their machine?

Obviously this is not possible at all. It isn't possible neither from the point of view of the machine nor of the basic concepts of the programming languages. It is impossible for logical and physical reasons.

Simply take the example of the definition of EQ in the programming language LISP:

$$EQxy =_{def} \text{if } (eval \ x) = (eval$$

*y) then true*  
*else false*

The equality EQ of x and y is strict, it is fulfilled or it is not – tertium non datur. The logic which is ruling these conditions is strictly binary. It is in whatever form a two-valued logical system which is ruling the conditions of equality. All in all, there are three levels of equality involved ruling this definition: the definitional ( $=_{\text{def}}$ ), the defined (EQ) and the defining (=).

There is also no chance on the level of implementation on a more physical level of a machine. Two states are equal if they have the same address, and if they have the same address they have the identical physical realization which is the equality (=).

It seems that there is no chance to escape this situation.

## **2 America wants it all - life, the Universe and everything**

Again:

*"In technical terms, how could it be possible that two different states of a computation could occupy the very same place in the computing space of their machine?  
Obviously this is not possible at all."*

We can paraphrase this statement into a more accessible terminology.

*In political and military strategies, how could it be possible that two different states of this planet could occupy the very same place in the*

*power space of their hegemony?*

*Obviously this is not possible at all.*

I surely always thought that such paraphrases would "automatically" happen in the mind of the readers of my texts.

Obviously this is not the case at all.

OK, restart reading, or enjoy DERRIDA'S MACHINES.

Therefore I will give some hints in this Blog which, in my opinion, are unnecessary, because of their self-evidence. To study, say ancient Chinese and Pythagorean Number Theory and Logic, is not a lost academic game and also not a "brainfuck" at all, but of enormous help to surpass today's dilemma of digitalism and its self-destruction. My hope is, that with such studies we will be better "weaponed" to "fight" the "conflicts" on the way through to a development of polycontextural logic and morphogramatics, as first steps beyond contemporary global madness.

There is nothing shiny in morphogramatics, nor is there a masters voice to follow.

But first I will deal with the (high)lights of enlightened reason.

### **Keywords:**

*light, lighting, lightening, enlightenment, laser beam, Lichtung, blind, blinding, blenden (germ.).*

To make a rest (Feierabend), enlight your cigarette, then go and visit Paul Feyerabend

**And now, let's learn the News from America!**

"The Bush administration has staked an

aggressive new claim to dominate space - rejecting any new treaties that seek to limit the United States' extraterrestrial activities and warning that it will oppose any nations that try to get in its way."

Obviously, again, these logocentricists at the Pentagon have forgotten the possibility of extraterrestrial visitors, probably not actually on the way yet.

*America wants it all - life, the Universe and everything*

*"The United States considers space capabilities -- including the ground and space segments and supporting links -- vital to its national interests," the policy said.*

*"Consistent with this policy, the United States will: preserve its rights, capabilities, and freedom of action in space; dissuade or deter others from either impeding those rights or developing capabilities intended to do so; take those actions necessary to protect its space capabilities; respond to interference; and deny, if necessary, adversaries the use of space capabilities hostile to U.S. national interests."*

The White House said the policy does not call for the development or deployment of weapons in space.





Tony Auth, <http://cartoonbox.slate.com/hotopic/?topicid=38&image=0>

Cartoon from Tony Auth



Spiegel

*"This policy emphasizes that the United States is committed to peaceful uses of space by all nations and that space systems enjoy the right of free passage,"* National Security Council spokesman Frederick Jones said.

He said the United States maintains the right of self-defense and the protection of its interests and assets in space.

*"Protection of space assets does not imply some sort of forceful action,"* he said. *"There is a broad range of ways to protect our space capabilities"* such as system hardening, encryption, maneuvering and other methods.

*"The new policy is consistent with previous national space policies in this regard,"* he said.

Jones said the challenges and threats facing the United States have changed in the decade since the space policy was last updated.

*"Technology advances have increased the importance of and use of space,"* he said. *"Now,, we depend on space capabilities for things like: ATMs, personal navigation, package tracking, radio services, and cell*

*phone use."*

The new policy was first reported by The Washington Post.

**Here it is:**

**UNCLASSIFIED**

**U.S. National Space Policy**



The President authorized a new national space policy on August 31, 2006 that establishes overarching national policy that governs the conduct of U.S. space activities. This policy supersedes Presidential Decision Directive/NSC-49/NSTC-8, National Space Policy, dated September 14, 1996.

### **1. Background**

[...]

For five decades, the United States has led the world in space exploration and use and has developed a solid civil, commercial, and national security space foundation. Space activities have improved life in the United States and around the world, enhancing security, protecting lives and the environment, speeding information flow, serving as an engine for economic growth, and revolutionizing the way people view their place in the world and the cosmos. Space has become a place that is increasingly used by a host of nations, consortia, businesses, and entrepreneurs.

In this new century, those who effectively utilize space will enjoy added prosperity and security and will hold a substantial advantage over those who do not. Freedom of action in space is as important

to the United States as air power and sea power. In order to increase knowledge, discovery, economic prosperity, and to enhance the national security, the United States must have robust, effective, and efficient space capabilities.

## **2. Principles**

The conduct of U.S. space programs and activities shall be a top priority, guided by the following principles:

The United States is committed to the exploration and use of outer space by all nations for peaceful purposes, and for the benefit of all humanity. Consistent with this principle, "peaceful purposes" allow U.S. defense and intelligence-related activities in pursuit of national interests;

The United States rejects any claims to sovereignty by any nation over outer space or celestial bodies, or any portion thereof, and rejects any limitations on the fundamental right of the United States to operate in and acquire data from space;

The United States will seek to cooperate with other nations in the peaceful use of outer space to extend the benefits of space, enhance space exploration, and to protect and promote freedom around the world;

The United States considers space systems to have the rights of passage through and operations in space without interference. Consistent with this principle, the United States will view purposeful interference with its space systems as an infringement on its rights;

The United States considers space capabilities -- including the ground and space segments and supporting links --

vital to its national interests. Consistent with this policy, the United States will: preserve its rights, capabilities, and freedom of action in space; dissuade or deter others from either impeding those rights or developing capabilities intended to do so; take those actions necessary to protect its space capabilities; respond to interference; and deny, if necessary, adversaries the use of space capabilities hostile to U.S. national interests;

- *The United States will oppose the development of new legal regimes or other re-strictions that seek to prohibit or limit U.S. access to or use of space. Proposed arms control agreements or restrictions must not impair the rights of the United States to conduct research, development, testing, and operations or other activities in space for U.S. national interests; and*
- *The United States is committed to encouraging and facilitating a growing and en-trepreneurial U.S. commercial space sector. Toward that end, the United States Government will use U.S. commercial space capabilities to the maximum practical extent, consistent with national security.*

### **3. United States Space Policy Goals**

The fundamental goals of this policy are to:

Strengthen the nation's space leadership and ensure that space capabilities are available in time to further U.S. national security, homeland security, and foreign policy objectives;

Enable unhindered U.S. operations in and through space to defend our interests there;

Implement and sustain an innovative human and robotic exploration program with the objective of extending human presence across the solar system;

Increase the benefits of civil exploration, scientific discovery, and environmental activities;

Enable a dynamic, globally competitive domestic commercial space sector in order to promote innovation, strengthen U.S. leadership, and protect national, homeland, and economic security;

Enable a robust science and technology base supporting national security, homeland security, and civil space activities; and

Encourage international cooperation with foreign nations and/or consortia on space activities that are of mutual benefit and that further the peaceful exploration and use of space, as well as to advance national security, homeland security, and foreign policy objectives.

<http://www.ostp.gov/html/US%20National%20Space%20Policy>

Bush Sets Defense As Space Priority  
U.S. Says Shift Is Not A Step Toward Arms;  
Experts Say It Could Be

### **3 And what is the Chinese Challenge in this Space Game?**

United States concern as China targets spy

satellite with laser beam

Andrea Shalal-es

*"CHINA has beamed a ground-based laser at American spy satellites over its territory, the US defence department has said."*

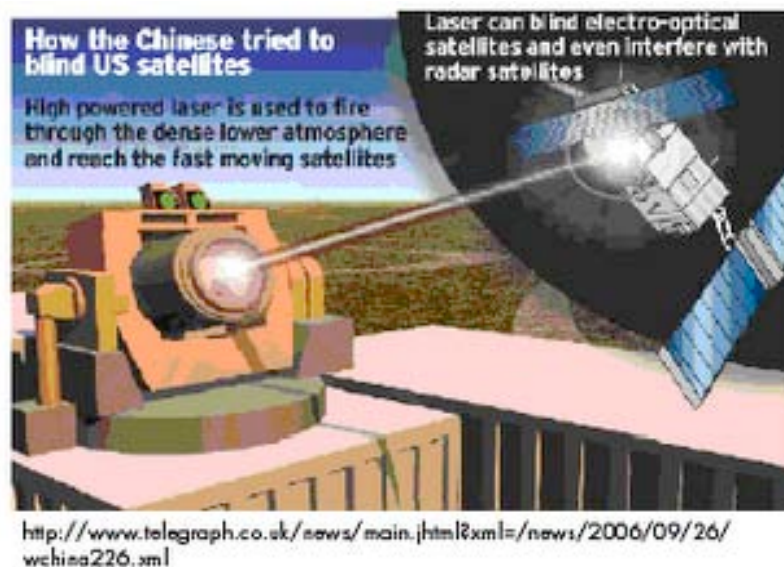
*"Space is a much bigger part of our military posture than it used to be, so any effort by the Chinese or anybody else to jam our satellites is potentially a big deal," said Loren Thompson, a defence analyst at the Lexington Institute."*

### **Discussions:**

[http://digg.com/tech\\_news/Chinese\\_Lasers\\_vs\\_US\\_Satellites](http://digg.com/tech_news/Chinese_Lasers_vs_US_Satellites)

<http://www.spacedebate.org/argument/1343>

<http://www.spacedebate.org/blog/>



### **Beijing secretly fires lasers to disable US satellites**

By Francis Harris in Washington

The document said that China could blind American satellites with a ground-based laser firing a beam of light to prevent spy photography as they pass over China.

According to senior American officials:

*"China not only has the capability, but has exercised it." American satellites like the*

giant Keyhole craft have come under attack "several times" in recent years. Although the Chinese tests do not aim to destroy American satellites, the laser attacks could make them useless over Chinese territory. The American military has been so alarmed by the Chinese activity that it has begun test attacks against its own satellites to determine the severity of the threat. Satellites are especially vulnerable to attack because they have predetermined orbits, allowing an enemy to know where they will appear. "The Chinese are very strategically minded and are extremely active in this arena. They really believe all the stuff written in the 1980s about the high frontier," said one senior former Pentagon official."



"If  
U.S.

The Army's Tactical High Energy Laser Advanced Concept Technology Demonstrator (THEL/ACTD) has successfully demonstrated its ability to detect, track, engage and destroy a Katyusha rocket armed with a live warhead. The rocket in flight was successfully intercepted and destroyed in field testing at the Army's High Energy Laser Systems Test Facility, White Sands Missile Range, N.M.

<http://www.spacedaily.com/news/laser-00g.html>

military weapons planners have learned anything from the varied conflicts of the past quarter century, it is that the challenges are not getting any more predictable. With the nature and capabilities of U.S. opponents

changing on practically an engagement-by-engagement basis, deciding which new weapon technologies will best serve soldiers in the battle theaters of the future remains a high-stakes guessing game."

"The enemy is no longer necessarily a nation; it can be a terrorist cell. The enemy may not possess high-tech weaponry yet still pose a threat--by exploding truck bombs on suicide missions or by firing hand-launched missiles against F/A-22 fighter jets. Nor, despite the absolute technological supremacy of the U.S. military today, can strategists afford to ignore the possibility that a nation that has developed advanced weaponry might come to pose a threat in a nightmare future."

### **Dialectics of Lighting and Blinding**

Where there is too much light we need some blinds. Because too much light is blinding your sight. A Blender (germ.) is a blender (dazzler, engl.), but a Blinder is not a necessarily a Blender.

Blinding is the opposite of lighting. Both are forming together the system of "en-ligth(en)ment". If light is used to spy then the defence to blind with light is not only enlightened but the start of a first round in the spiral of reflection too. Hegel would call this reflectional game "*schlechte Unendlichkeit*" (bad infinity), because it runs into an infinite regress. He would also call the first step of the game, the spying, a *factum brutum*. And nobody reflected has to accept such a factum brutum.

In the epoch of digitalism with its binary logic it seems we have to live with it.

Or we can try to surpass the madness, say with a neither-nor rejection of both at once.

I remember vaguely an **Ancient Mongolian** story about far-sightedness and blindness. At the end of a competition about far-sightedness, one guy says, my friend can see much more than all of your guys



together. Also he has only one eye; and on this eye he is blind. But if he sees, he sees three-times more far than all of you together. Try it!

#### **4 Lichtung: "Anchors aweigh!" and the New Enlightenment?**

Introduction to and Discussion Summary of Wang Hui's

Humanism as the Theme of Chinese Modernity

ABSTRACT by WANG HUI

"By examining humanist and **Enlightenment** discourse in reference to China and to the West, this essay reopens the question of how modern Chinese intellectuals assimilated Western ideas and applied them in their own social practice. It indicates the historical conceptions that underlie Western humanism and traces the evolution of Chinese humanist discourses in terms of their media of dissemination, their impact on the organization of knowledge, and their relationship to Marxist concepts of the mode of production."

#### **Lichtung as clearance, clearing, glade and to unanchor**

Martin Heidegger: Wahrheit als die DIE LICHTUNG DES SEINS.

#### **Darling look, The Future is Bright!**



"ONCE again, science fiction has predicted science fact. Remember those movies where the hero (or villain) uses a beam from a compact laser to blow a rocket out of the sky?"



## Meeting the Challenges

The SSHCL delivered to White Sands for testing last September has an amplifier composed of nine disks of neodymium-doped glass (Nd:glass). In this prototype, an electrical source powers flashlamps, which in turn pump the disks, which then release the energy in pulses of laser light. The average output power of the SSHCL is 10 kilowatts, and it can deliver 500-joule pulses at 20 hertz in 10-second bursts—essentially vaporizing metal. The prototype requires 1 megawatt of input power to produce a 13-kilowatt laser beam. ..."

The former Pentagon official put it more bluntly.

*"The Air Force is trying to put a happy face on this," he said. "It's not that they don't know what do. It's that they don't have the money in their space budget. It's that simple."* (DefenseNews.com)

## 5 LICHTUNG: Beyond Belichtung

### Heidegger's Lichtung (clearing) as glade.

"In Heidegger we find a meditation on what he calls the "**clearing**" (Lichtung) or truth as aletheia, the first openness that is the precondition for all other intentional

structures, and that has a special and privileged relation to the artwork as the opening of a world."

"**Lichtung**: As an open field of sense-making relations, the world is an "opening" that "clears" things, i.e., makes them in-telligible-as *aletheia*. To "clear" something means to free it from dumb



lethic "thereness" by relating it to human purposes. In that capacity the world is called *Lichtung*, not the "lighting process" but the

synthetic-differential "clearing" that opens things up as. *Lichtung* erbringt Anwesen: By rendering things intelligible-as, the clearing gives being."

Beiträge and later works make it clear that Ereignis is not an "event" in any usual sense of the term (i.e., *Vorkommnis* und *Geschehnis*: SD 21.27) and that what

Heidegger meant by Ereignis is not primarily "appropriation" or "enowning." In the forthcoming GA 71 (Das Ereignis, 1941-42) Heidegger shows that the original etymon of Ereignis is not *eigen* ("own," parallel to the Latin *proprium*, from which derive "appropriation" and "enowning") but rather *eräugen/ereugen*, "bringing something out into view." Heidegger got much of this from Jacob and Wilhelm Grimm.<sup>14</sup> More importantly, however, in GA 71 (section "Das Ereignis," sub-section "Er-eigen -- Er-eigenen," ms. 100a), Heidegger annotated the Grimm etymologies, thereby providing his own understanding of Ereignis. The noun Ereignis ("event, occurrence") points back to the reflexive verb *sich ereignen*, "to happen, occur."

Alter Hohlweg, Voßbruch

### **Beyond Lighting and Blinding**

"Heidegger likewise accepts that the primary meaning of *sich ereignen* is "to come into view, to appear, to be brought forth and revealed":

*Er-eigen: er-eugen - er-äugen - ostendere, monstrare, in die Augen, Blick, Anblick fallen - erscheinen sich offenbaren, zu-tragen, be-geben.*

Most significantly, he glosses all this with a verb that does not appear in the Grimms' etymology. In apposition to Grimms' *erweisen* and *erzeigen* Heidegger places *lichten*, "to disencumber and free up, to open up or clear":

*"lichten - erweisen - erzeigen.*

Thus, in the reflexive, *sich erweisen* and *sich erzeigen* ("to show up or appear as

what one is") mean the same as sich lichten, "to be opened up and cleared." Sich ereignen ("to occur") means that something is brought out into the open, comes into the clear:

*"in die Lichtung einbeziehen."*

Heidegger reinforces this when he states that das Er-eigen (which he glosses as Er-äugen) has the transitive sense of "lichtend - weisen" -- "to show by opening up" (in the reflexive: "to appear by having been opened up").

Thomas Sheehan, A Paradigm Shift in Heidegger Research

### **New Enlight(en)ments in Glasgow? The Scottish Enlightenment**



Scotland not only had an important time in the

development of laser technology but even more widely known a vibrant epoch of cultural enlightenment.

"The *"Scottish Enlightenment"* stretched roughly from 1740 to 1790. Unlike in France, many of its protagonists were academics. Francis Hutcheson, Adam Smith, Thomas Reid and John Millar were professors at the University of Glasgow. Adam Ferguson, Dugald Stewart and William Robertson were at the University of Edinburgh. The universities of Aberdeen and St. Andrews were dominated by their students. But there were also some important figures outside the academy who influenced the course of the dialogue, including

Lord Kames, Sir James Steuart, Dr. James Anderson and, above everybody else, the towering figure of David Hume. [...] The efforts of the Scottish school led Voltaire to note that "we look to Scotland for all our ideas of civilization".

Picture Ron Stirling, Dennistoun, Glasgow

*Finished writing during the Big FireWorks of Eid, Celebration of Light and Enlightenment, Glasgow 2006*

**Eid ul-Fitr** (*Arabic: عيد الفطر*), is an Islamic holiday that marks the end of Ramadan, the month of fasting.

New Enlightenment in the Orbit? (PDF)

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posted by Rudolf | 5:53 AM | [0 comments](#) [links to this post](#)

SATURDAY, OCTOBER 07, 2006

## 寓理于算，不证自明

有许多这类例子。

如《九章算术》中的鳧雁相逢（鳧就是野鸭）：

“今有鳧起南海，七日至北海；雁起北海，九日至南海。今鳧雁俱起，问何日相逢？”

答曰：“三日十六分日之十五”

中国古代数学喜欢把各种实际问题分类，概括为算法。算法就是解决一类有共同特征的问题的规范程序。鳧雁相逢的算法叫作“齐同术”：“按此术，置鳧7日一至，雁9日一至，齐其至，同其日。定63日鳧9至，雁7至。今鳧雁俱起而问相逢者，是为共至。并齐以除同，即得相逢日。”

翻译成现在的伪代码形式：

- (1) 同其日；# 把63天作为同其日
- (2) 齐其至；# 63天鳧9至，而雁7至
- (3) 并齐；# 并齐7 + 9
- (4) 并齐以除同；# 并齐以除同就是 63除以16
- (5) 得相逢日；# 得答案

在现代组合学中使用算法作为证明的过程已经成立标准方法，如图论中的一个基本定理“最大流-最小割”定理（Max-flow Min-cut Theorem）也叫Ford-Fulkerson Algorithm，就是这样的。这跟中算的“寓理于算，不证自明”的方法不谋而合！

中国古代数学区别于公理化数学的最重要的特征在于，中国数学是面向算法的，根据各类实际问题的共同特征概括为规范的算法，所以中国数学主要是研究算法的：如今有术、衰分术、更相减损术、变分术、方程术、盈不足术、割圆术、方程术、大衍求一术和勾股术等等。

以下可做参考。

来源：<http://www.frchina.net/data/detail.php?id=12125>

作者：傅海伦

出处：北大科学史与科学哲学

“中国的筹算体系和模式在宋元时期达到数学的高峰在很大程度上是算法机械化达到最高水平。贾宪三角和增乘开方法是对《九章》以来开方程序的重大提高和创造，秦九韶的正负开方术又把增乘开方法发展到十分完备的境地，其大衍求一术也是在历代对“上元积年”推算基础上将“物不知数”问题解法发展到最一般的机械化程序。李冶的天元术更是对列方程算法的重大改进和突破，同时也是几何代数化思想的完美体现。从天元术到四元术，是解一般高次方程向多元高次方程组发展的必然结果和要求。因此，中国在宋元时期算法机械化达到空前的高水平，是与传统数学文化价值观的要求相一致的，是中国筹算文化排列模式和变换技术长期积累后的自然发展，它是中国筹算体系下的数学计算以快速、准确、简洁解决一类具体问题而发展自己的操作运演的必然趋势和结果。

中国古代数学的筹算体系和机械化特色，决定了它不可能形成如同欧几里德《几何原本》那样完整的演绎逻辑系统，而由于筹算本身的直觉启示、模型构造性特点以及特殊的运演排列的结构和形式，决定了中国古代数学是以解决实际问题为目的的抽象模型化方法、化归方法，概括出一般原理、原则用以解决一大类问题的归纳和演绎方法相结合的有机统一，决定了中算的“寓理于算”、算理结合的主要特色。由于中算的“寓理于算”常常是将“理”寓于“法”中，许多中算算法如更相减损术、变分术、盈不足术、割圆术、方程术、大衍求一术等等，算法步骤精细，一步一步推导十分明确，有“不证自明”的效用，而对几何问题同样是采取几何代数化的形数结合，“寓理于算”。开平方、开立方和解高次方程的方法，都由几何模型导出，从图验法到宋元算家的演段法，其本质相同，但更侧重于阐明算法的合理性而不是阐明几何关系。”

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posted by Rudolf | 1:24 AM | [0 comments](#) [links to this post](#)

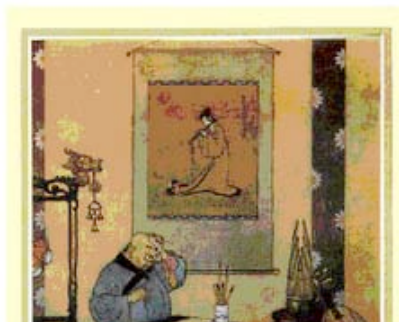
THURSDAY, OCTOBER 05, 2006

## Still Writing?!

### Postcard

### from Madoka Takashiro

(Tokyo/Karlsruhe)





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posted by Rudolf | [7:00 AM](#) | [0 comments](#) | [links to this post](#)

TUESDAY, OCTOBER 03, 2006

## Semiotics to Morphogrammatics

Anybody who can identify a sign, say "a", would accept that such an identification is not insisting on the small differences between different occurrences of the sign or letter "a". It would be ridiculous to say that a letter "a" in red ink has not the same alphabetic meaning, i.e., to be the letter "a" if written, in the same way and having the same form, with black ink. A letter "a" is a letter "a" independent of physical differences, at least as long as the letter can be identified as the letter "a". In other words, a letter can be identified as such a letter only if it can be strictly separated from its environment. If the environment is disturbing too much the occurrence of the letter it can not be clearly identified. This interplay between identification and separation is well known in semiotics and has practical relevance for OCR software. Given two letters "a" and "b", strings can be produced by concatenation, "aa", "bb" and "ab", "ba".

Now we learnt before that an "a" is an "a" and thus a "b" is a "b". Obviously, "aa" and "bb" are different, but also "ab" and "ba". And this is working for all sets of letters we can identify.

This ability of identification has a very old tradition. It is independent from specific languages, natural or artificial. But slowly it gets quite boring!

Our children are fit in it and our computers are succeeding well.

On the other hand, more or less all our scientific and especially our mathematics is based on sign systems.

Why should we make such a big thing to separate, say, "aa" from "bb", and "ab" from "ba"?



Are they not the same? There is no interesting difference between "aa" and "bb" and the same for "ab" and "ba". To insist that "aa" is different from "bb" is not less annoying than to insist that a green letter "a" is alphabetically different from a black letter "a".

Just for fun we could accept such a move away from the letter game of our childhood and academics. From now on we are interested only in patterns of letters and not in letters any more. We could call this move a pattern-oriented approach to scripts, or even, to be scientifically trendy, a morphic abstraction. Morphe in Greek means form, pattern or better, Gestalt. And such inscriptions of patterns can be called morphograms. Such a game would be useless if it wouldn't produce new rules. So, what are the new rules of the game? To answer this question, we remember the rules of the games of letters. Letters, marks, signs, characters comes as atomic signs and can be connected to compound signs. The atomic signs are collected in a signs repertoire, also called alphabet. It is presumed that the numbers of signs of an alphabet can be finite or even infinite. The compound signs are then produced out of such an alphabet with the help of rules. The basic rule is the rule defined by concatenation. As usual, there is also a dual approach. Instead of concatenation we can chose its dual, substitution. Such compound signs are called words. Both together, the alphabet and the rules, are producing a word algebra. The algebra determines the properties of the rules.

### **Monads**

"Words" of length 1 are called in a morphogrammatic game, monadic words, or monads. We can think of a plurality of monads, like (a), (b) or (c). But if we bring those isolated monads together, we discover that they are all the same, i.e., monads. They are involved in a morphogrammatic equivalence.

On the semiotic side, we see, that all different atomic signs are not equal but different. Later, we can introduce a less "semiotic", i.e., sign-focussed, approach to morphograms and will be able to avoid such a paradox wording of the sameness of a plurality of monads. In fact, there is, morphogrammatically, only one monad. This fact doesn't make a monad "holy", in the sense of Pythagoreism.

We can also bring two monads together, to form a coalition or being concatenated. But instead of being chained, monads have only the chance to cooperate as the same or as a different to the existing monad or, later, morphogram.

Thus, (a), (a) --> {(aa), (ab)}  
 or (a), (b) --> {(aa), (ab)}  
 and (ab), (a) --> {(aba), (abb), (abc)}.

The semiotic approach is still too much focussed on the objects of the game instead of the operativity of the rules (morphisms) of morphogrammatics. Similar to the duality in category theory of objects and morphisms.

### Convention

To inscribe with signs (letters, characters, marks, numbers, etc.) patterns we have to agree to a convention, say, we take (a) as the notation of a morphogram of length 1. All other representations like (b), (c), etc. are morphogrammatically the same.

This convention is not more obscure than to agree to a standard representation of a sign, say a. Remember, this sign "a" can have many occurrences. For that, the discipline of semiotics is distinguishing between type and token of a sign. Tokens are inscribed on paper, types are recognized in the mind of a reader. Types, thus, are abstractions from tokens.

### Chiasm of types and tokens

Morphograms as double abstractions  
 Graphemic abstraction from token to type:

$\{a, \mathfrak{a}, a, \mathfrak{a}, a, \mathfrak{a}\}/\text{graph} = \{a\}$

Morphogrammatic abstraction from type to morphogram:

$\{a, b, c, d, e, f\}/\text{morph} = (a)$

But:  $\text{conc} \{ (aba), (a) \} = \{(abaa), (abab), (abac)\}$

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## Blog-Test

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posted by Rudolf | [7:18 AM](#) | [0 comments](#) | [links to this post](#)

SATURDAY, SEPTEMBER 30, 2006

### Günther's Asymmetry

#### **Letter from Prof. Dr. Gotthard Günther to Prof. Dr. Rainer Wiehl, from 8.12.78**

"... A. Gehlen that all main culture is in principle script culture... "

"...strange, so far not solved phenomenon of the Chinese culture...in pre-Christian time admit that there are also alphabetic scripts, which can in principle be much more simple, cleared away and remained with ideograms. In addition a further fact. There are all in all, to which also late characters excluded from taboo reasons, belong approximately 70000 ideograms. In addition however the classical north Chinese contains of only about 500 out-speakable words. In south Chinese there are perhaps 800 or 900, so that on speakable words, even if one counts only the ideograms in use, hundreds of ideogrammatic characters come.

That is, in holding to the ideograms, lies an unconscious insight of a massive asymmetry between spoken and written language.

**It is the written language, on which a main culture rests.**

It possesses an identity strength, which stands out clearly against the identity weakness of the spoken word. The Chinese are not in vain the socially most stable people in the past main cultures. They would not be it without this holding to a system, which seems to have disadvantages only for the progressive European.

Now the title of my work in Belgrade is "Identity and Counter-Identity" – i.e. the universe is a complexion of temporal character, in which an identity develops into a counter-identity. In doing so the universe necessarily has to pass through an epoch of ontological identity weakness.

I

The subjectivity of humans particularly, but generally all subjectivity, are ontological places of identity weakness, which in the long term cannot hold themselves. That becomes understandable, if one realizes that one can exchange the words object and subject with the pair of opposites, symmetrical and asymmetrical systems. Only symmetrical systems have a certain stability. Souls are from the beginning designed on dying, because they are expression of total asymmetry. There is no more powerful asymmetry than those, which lies in the contrast of I and world. The Chinese failed at the role to liquidate the actual epoch of the main culture, because they tried to develop the much more powerful negative language before they possessed a positive language practically completed in Occidental mathematics. That cannot be done for purely technical reasons, if one brings to mind oneself the beginnings of the negative language, as I indicated them in the Heidegger essay. In this premature adherence to the ideogrammatic negative language, China swam against the current of world history, and Europe went in the opposite attitude with history." (translation, kae)

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### **Decision against Alphabetism?**

Gotthard Günther then asked the Sinologist Engelbert Kronthaler,

*"When did the Chinese consciously decide against the introduction of alphabetic writing?"*

Kronthaler answered this question some years later at 28.3.1979.

His answer was published in *semiosis*, 1980 in German language.

### **SUMMARY**

"The point at issue is G. Günther's question as to when the Chinese consciously decided in favour of visual script and against phonetic script. Alphabetical and ideogram scripts are not only various steps of development of script, they are two types, each on the pinnacle of different lines of development. The alternative phonetic script/visual script reflects the different world view of West/East, speech/script. In both, the relationship speech/script is equally evident, it is however subject to a different primacy. The conversion from the one to the other would

be more than just a change of script, of apparatus, it would essentially be the change of conception, would be connected with the abandonment of the other, and would, therefore, as a whole be a reduction of complexity which must be rejected." E. Kronthaler

## Chiastic Dynamism

Gunther understands the universe as a "*complexion of temporal character, in which an identity develops into a counter-identity*".

In contrast to the Heraklitian dynamism the Chinese dynamism is complex, parallel, concurrent, co-creative, i.e, chiastic. It is not only connected with temporality in the Western sense of *linear time*, but with space and spacing (making space). And this is exactly what Gunther is developing. In his lifelong search to incorporate time into logic (and arithmetic) he was forced to offer time its own space, i.e., time needs an own structural locus. Otherwise, time is ontologically subordinated to Being and Nothingness.

Loci are not in the mind (of a thinker), they are in the world. The mind is occupying only one locus in this grid of loci.

The big difference of Gunther's approach to chiastic dynamism or *dialectic cosmology* to other approaches lies in the fact that he tried and partly succeeded to implement it into *operative formalism*. Without that it would be something like a continuation of the tradition of notional narratives.

The French philosopher Alexandre Kojève told me, when I was driving him in West-Berlin with my Italian car to his hotel, that everything to be said had been said. The only thing to do now is to do something now. I tried to confront him with the mathematics of the Gödel proof. But this was obviously not good enough, probably because it was also only a book, again.

## Next epoch

In doing so, the universe necessarily has to pass through an epoch of ontological identity weakness. Which was, after Gunther, the Western epoch.

This epoch is defined by Western philosophy, science,

technology and economy based on alphabetism.

There are good reasons to think that this epoch has come to a closure.

Gunther is not saying in his letter that the next epoch will be necessarily Chinese. But he says that the Chinese thinking, mediated by its script, has an "*identity strength*" not existing in the Western world. But China has not (yet) developed an operativity correspondig to the complexity of its writing paradigm. This kind of operativity is proposed by the Guntherian project of a "negative language".

We shouldn't supress the thought that a form of intelligence, not bounded and resricted by *terrestrial conditions* and able to communicating with human beings, would probably posses a more stable "identity strength" than any terrestrial cultures.

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(blog-test version)

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posted by Rudolf | [2:14 PM](#) | [0 comments](#) | [links to this post](#)

SUNDAY, SEPTEMBER 24, 2006

## “道可道非常道，名可名非常名”

老子《道德经》第一章说：

"道可道非常道

名可名非常名

無名天地之始有名萬物之母

故常無欲以觀其妙

常有欲以觀其徼（音：較）

此兩者 同出而異名 同謂之玄

玄之又玄 眾妙之門"

"道可道非常道，名可名非常名"，解释为"世界是可以被解释为道即规律的，但规律不是不变的；事物的概念是可以定义的，但定义不是不变的"。这是中国古代科学思想跟作为西方和现代科学技术起源的古希腊思想的根本区别。古希腊思想后来发展出了以公理化系统为特征的科学思维方法体系，公理化是形式逻辑体系的最后完成形式，是整个工业化科学技术辉煌成就的基础之一，另一个基础是系统的科学实验。

然而，后工业化的所有科学技术成就实际上是建立在两条基本科学原理之上的，而这两条原理都是关于人类认识能力的否定性的断言。

第一，海森堡的测不准原理；

第二，歌德尔的不完备定理。

第一原理是说准确地测量物理量是不可能的！第二原理是说构造完备无矛盾的体系是不可能的！这实际上是否定了工业化科学技术成就赖以建立起来的思想基础和技术基础。这又一次验证了古老的逻辑——"事物的发展本身孕育着否定自身的因素"。后工业化时代的科学技术的起点好像是从中国古代哲学家开始的地方开始的。

最重要的问题是在各个传统科学技术领域里尝试新的方法，以及开创新的科学技术领域，创建"新科学"、"新数学"。"名可名非常名"已经有了一个非常贴切的实际的例证，Python和Ruby中的变量和函数都不是预先声明的，而是在实际的应用环境中

(Context/Contexture) 动态地获得的，这就违背了形式逻辑的基本原则和要求！模块和软件的功能以及待要实现的任务在分布式计算环境中是被动态地分配给多个CPU处理的。

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posted by Rudolf | 7:51 PM | [1 comments](#) [links to this post](#)