



ISDE Assembly General Meeting Vienna

**Environmental Medicine
between Society and Individuals**



**Integration of Clinical Environmental Medicine
into the ISDE principles possible?**



October 25th – 26th 2019

P. Ohnsorge

International Society of Doctors for the Environment



- We are family doctors, researchers, clinicians, as well as specialists of all branches who are only too aware of the ecological problems impinging on our health and safety and who strive to promote healthier lifestyles
- ...resolved to offer to our patients not only an answer in terms of medical care, but to also advocate, initiate and promote effective preventative actions
- ISDE was established as a tool for educating and updating physicians and the general public and stimulating awareness and initiatives by public and private bodies, in particular governmental agencies.

International Society of Doctors for the Environment



Appeal to Humankind:

We, doctors for the environment, appeal:

To doctors and health professionals all over the world to be aware of their social functions and responsibilities and take actions to warn of health risks linked to environmental pollution and decay.

We would like to ask you to accept a cooperation ISDE – EUROPAEM, in order

- to promote Clinical Environmental Medicine to ISDE members
- to give support towards official medical societies (WHO, UNESCO etc.)
- to integrate Clinical Environmental Medicine into your international health policy
- to start campaigning against social injustice (court, Insurances, medical-political positioning)

Why should it interest ISDE?

- There is a change in the scientific approaches of natural sciences:
 - from Reductionism, with linear- and monocausal thinking
 - to Holism, that thinks and acts in complex systems.
- Risk-Awareness and -Management must be reoriented.
- ISDE should reconsider new strategies
- Working in Holism with Complex System Thinking, Clinical Environmental Medicine could offer support

Environmental health risk assessment needs improvement

- Recent international studies show a radical increase of environmentally caused diseases worldwide.
- The ground-breaking report from **Lancet October 19, 2017** shows:
 - “Pollution in the air, water, soil, and the workplace is linked to an estimated nine million deaths each year worldwide equivalent to one in six (16%) of all deaths.
- This death toll is
 - three times more than the number of AIDS, tuberculosis, and malaria-related deaths combined, and
 - 15 times greater than fatalities of wars and all other forms of violence.
- Most of these deaths are due to non-communicable diseases caused by pollution such as heart disease, stroke, lung cancer, and chronic obstructive pulmonary disease (COPD)”.

Environmental health risk assessment needs improvement

World Health Organization (WHO) published a fact sheet in June 2017

WHO/FWC/EPE/17.01 © World Health Organization 2017

- environmental factors are main causes of noncommunicable diseases (NCDs)
- ambient (outdoor) and household air pollution together caused more than 6 million deaths from cardiovascular diseases, chronic respiratory diseases and lung cancer in 2012.
- Other important environmental risks include second-hand tobacco smoke, exposure to chemicals, radiation and noise, and occupational risks.



Environmental health risk assessment needs improvement

P. Ohnsorge

Poster on the

International Conference:
Risk Assessment of
Indoor Air Chemicals
16. to 18. Sept. 2018

Umweltforum
Berlin
Germany



A new scientific approach: “Complex Systems thinking”

The study of complex systems represents a new approach to science that investigates

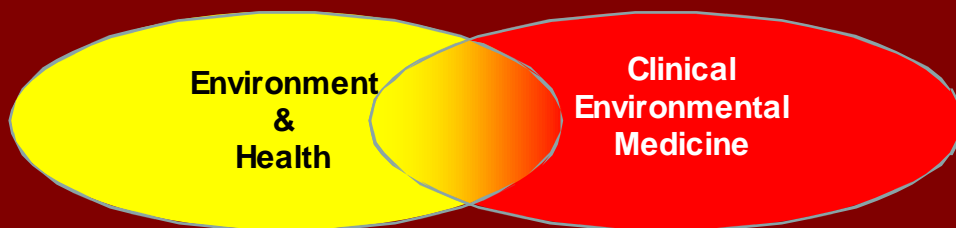
- how relationships between parts give rise to the collective behaviors of a system and
- how the system interacts and forms relationships with its environment.

Y. Bar-Ya - General Features of Complex Systems © Encyclopedia of Life Support Systems (EOLSS) Vol.1
UNESCO – EOLSS SAMPLE CHAPTERS KNOWLEDGE MANAGEMENT, ORGANIZATIONAL INTELLIGENCE AND LEARNING, AND COMPLEXITY
<http://www.eolss.net/sample-chapters/c15/E1-29-01-00.pdf>

Scientific shift from reductionism to holism

- For the last centuries, the Cartesian project in science has been to break matter down into ever smaller bits, in the pursuit of understanding.
- Mono- and linear - causal scientific approach turns out of date
- We are leaving now these centuries of Descartes dominated science, the reductionism.
- Complexity theory is a contemporary heir of systems thinking.
- A disturbance on any level - somatic, physical, psychic, or social - will radiate to all the other levels, too.
- Scientific holism holds that the behavior of a system cannot be perfectly predicted, no matter how much data are available

„Environmental Medicine“



Two different tasks

Two different scientific approaches

Two different tasks

“Environment & Health” concerns

What harm does the environment do to the population ?

- weak awareness →
- limited avoidance
- No comprehensive diagnose
- no sufficient therapy-strategy
- Late general prevention

“Clinical Environmental Medicine” concerns

What harm does the environment do to the individual ?

- full awareness →
- max. avoidance
- sophisticated diagnoses
- comprehensive therapy-strategies
- early individual prevention

Two environmental medical education lines

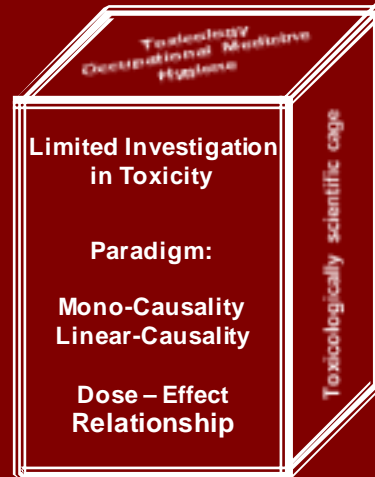
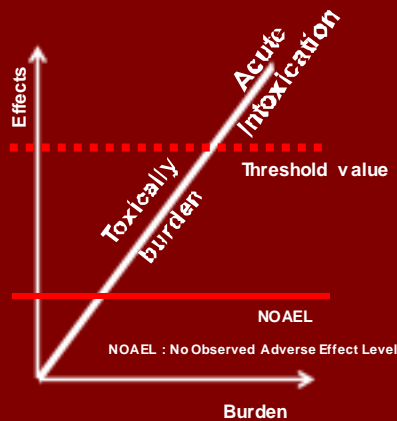
Environment & Health

- Population oriented
- Evidence-based medicine (EbM)
- basically theoretical application
- Based on
 - scientific findings
 - with a reductionist scientific approach
 - epidemiological reasoning

Clinical Environmental Medicine

- Individual oriented
- Establishing Evidence for EbM
- basically practical application
- Based on
 - empiric and scientific findings
 - with a holistic scientific approach (complex system thinking)
 - proved by hundreds of successful cures

Toxicology, Occupational Medicine and Hygiene claim the domain upon environmental medicine



Current Risk Assessment is unsatisfactory, due to



- No awareness and no acceptance of health effects outside this cage
- missing assessment of effects of multiple load burdening
- not being aware of
 - long time – low dose burden
 - time / duration of burdening
 - accumulation, depot formation
 - mobilization effects
 - additive / multiplying effects
- disregarding
 - Neuro-Endocrine-Immune-System (NEIS)
 - individual susceptibility
 - current vulnerability

Concerning individual environmental health care, current Risk-Assessment and Risk-Management failed

- **Epidemiologically data do not help for medical assessment of individually burden**
- **Current approach hinders the perception of individual chronic complex illnesses associated to the environment**
- **Due to lack of awareness, main stream medicine cannot offer any specific individual therapy nor specialized medical education**
- **Clinical Environmental Medicine cares for individuals suffering from environment associated complex illnesses**

Acting in Complex Systems the paradigm of Clinical Environmental Medicine is

- **Not only the dose defines the burdening effect**
- **but the sum of:**
 - Burden (physical, chemical, biological, psycho-social)**
 - + dose of burden**
 - + multi burdening**
 - + time and duration of burdening**
 - + vulnerability/ susceptibility**
 - + actual functionality of detoxification**

Two different scientific approaches

Environmental
medicine
follows
a
different
approach

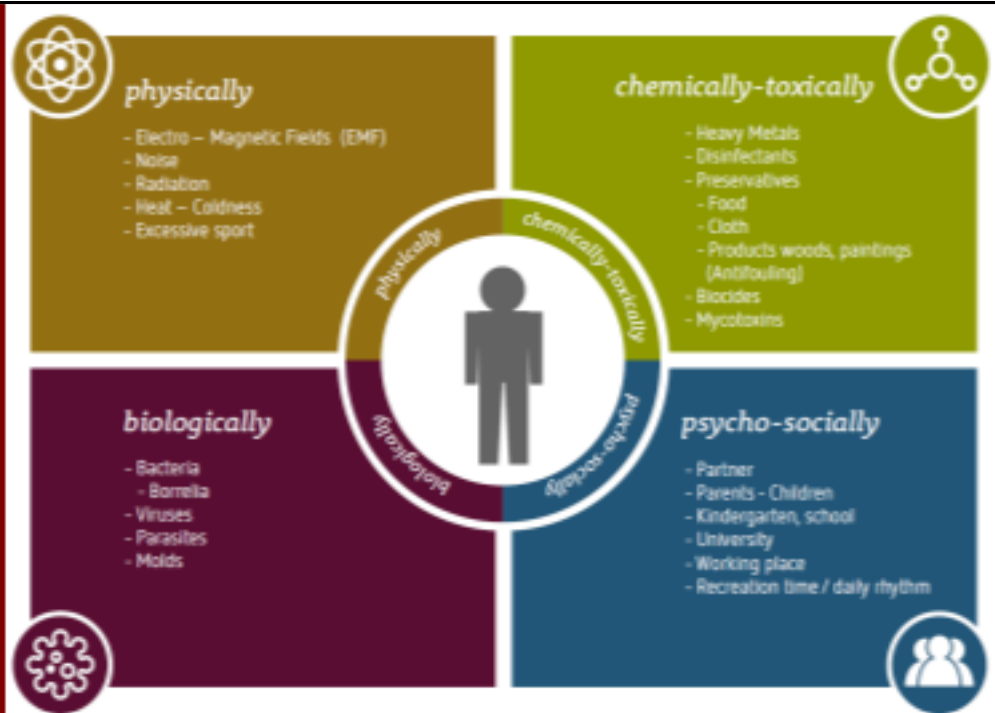
which is

- linear
- mono-
- dose-



Medicine
each of
ing,

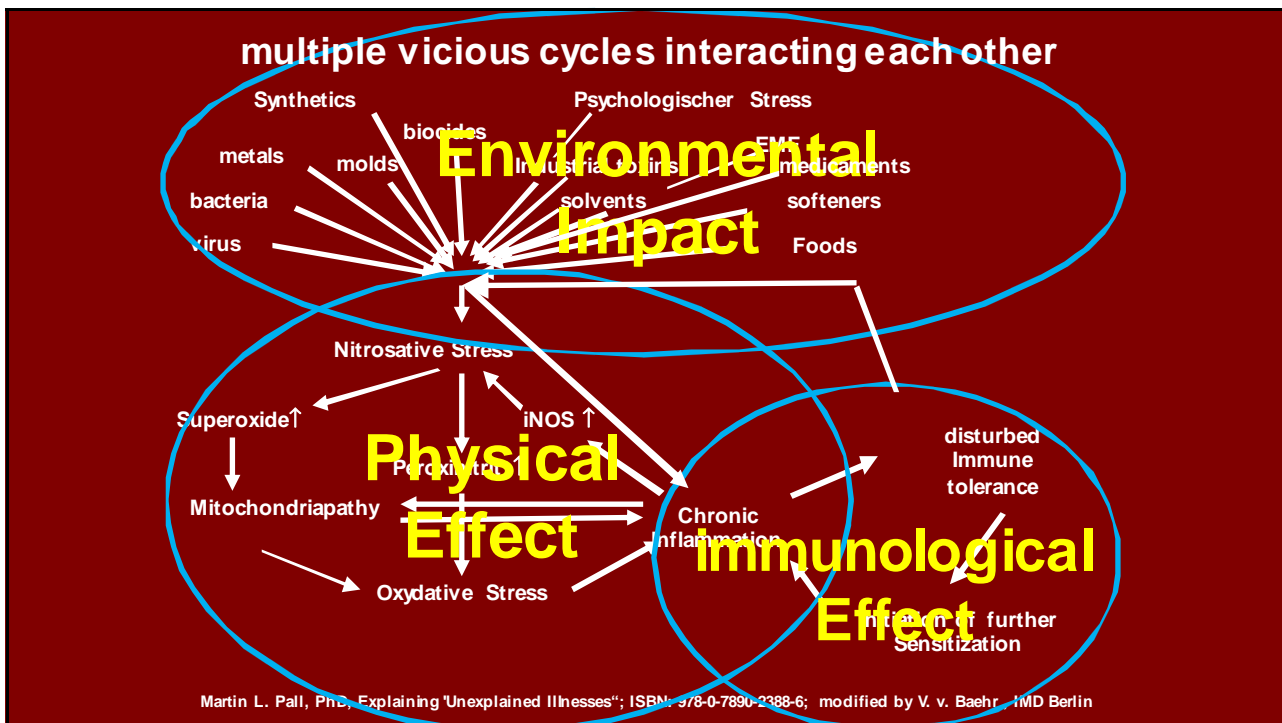
Clinical
Environmental
Medicine
is
thinking
multi-factorial,
being aware of
four different
kind of
stressors



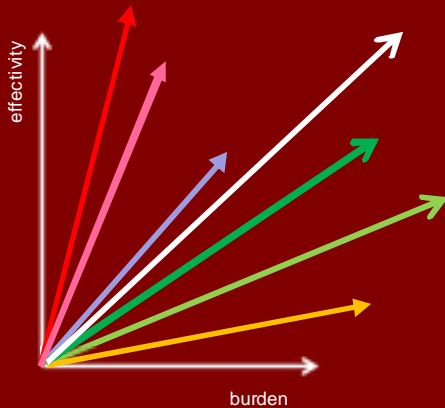
Thinking multi-functional Environmental Stressors aim for multiple organs and functions

With an impact on organs and functions by:

- chronic inflammation, nitrosative / oxidative stress
→ Neuro- Endocrine- Immune- System (NEIS)
- mitochondrial dysfunction
→ energy balance
- depletion of micronutrients (e.g. vitamins / minerals / enzymes)
→ metabolism / energy balance / NEIS

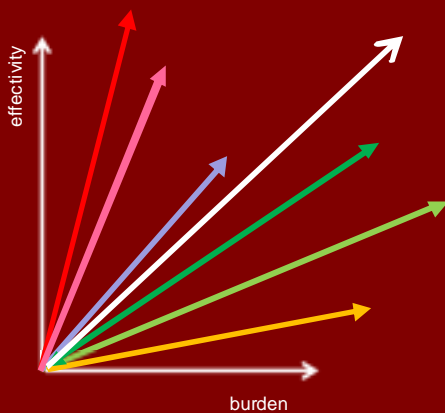


Multi-dimensionality in Clinical Environmental Medicine is barely to demonstrate graphically

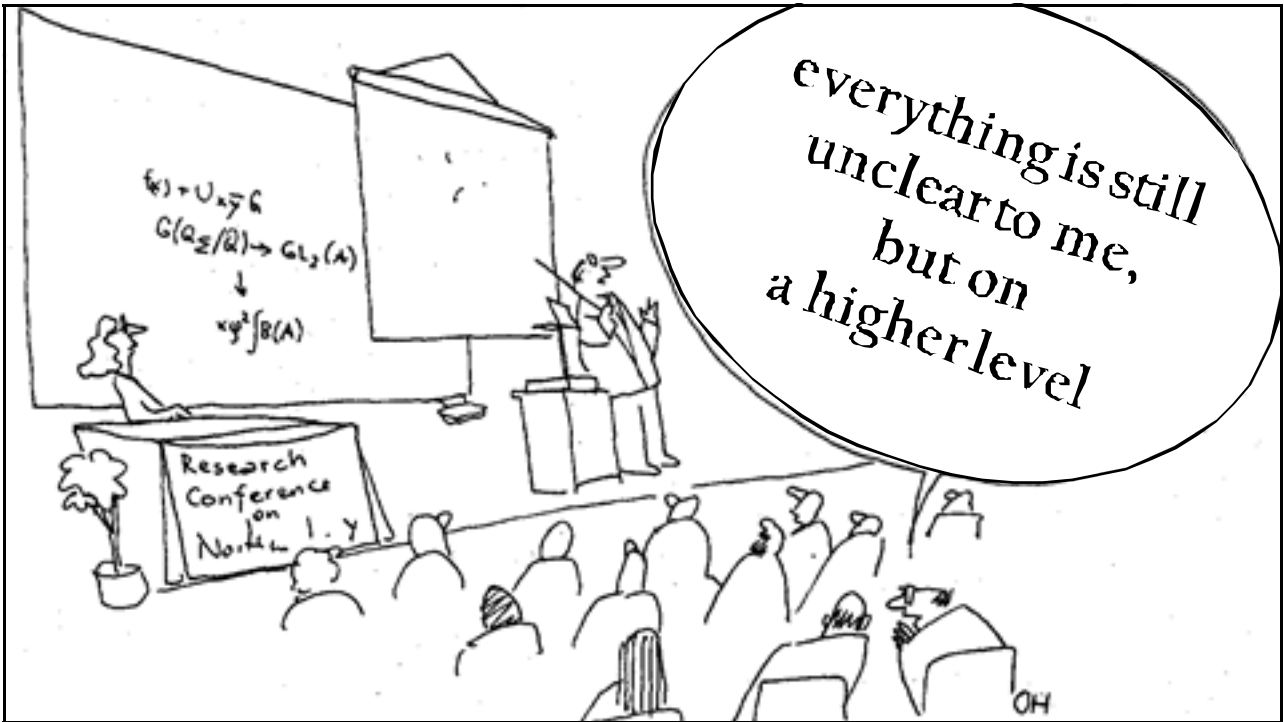


- burdening dosage
- multi toxicity/ burdening
- time of burdening
- duration of burdening
- actual vulnerability
- individual susceptibility
- actual functionality of metabolism

Multi-dimensionality is barely to demonstrate graphically in Clinical Environmental Medicine



- burdening dosage
- multi toxicity/ burdening
- time of burdening
- duration of burdening
- actual vulnerability
- individual susceptibility
- actual functionality of metabolism



Clinical Environmental Medicine Complex Systems thinking

Always investigate specifically



Case history

diagnostics and therapy- strategy, Pat.: G.I, ♀, 50 y.

Symptoms:

- therapy-resistant cough
- therapy-refractory compulsive throat clearing
- increasing serious food intolerance
- therapy-resistant violent bloating and flatulence

diagnostics and therapy- strategy, Pat.: G.I, ♀, 50 y.

Foreign diagnostics:

- Hyperreactive bronchial system
 - Intestinal dysbiosis therapy-refractory

 - Thyroid without any pathological findings
 - ENT without any pathological findings
 - Allergology without any pathological findings
- **on vacation free of complaints!**

diagnostics and therapy- strategy, Pat.: G.I, ♀, 50 y.

- As she got a completely internistic diagnostics
 - without any pathological findings, which could explain the Symptomatology
- Profession teacher: → immediate referral to the psychosomatic department
 - Diagnose: Overload syndrome as a teacher
 - Therapy: psycho-pharmaca , → Disability pension for 1 year
- No further investigations
after that year: she was declared disabled, forced to retire
50 years old!

diagnostics and therapy- strategy, Pat.: G.I, ♀, 50 y.

1. Environmental Medicine Anamneses

2. → Investigations:

Silent inflammation:

- dental foci
- alloplastic materials



diagnostics and therapy- strategy, Pat.: G.I, ♀, 50 y.

Investigations:

➤ Laboratory:

➤ Spec. IgE:

➤ class 3: Alpha-Lactalbumin und Latex [2] ↑

➤ class 4: Formaldehyde [2] ↑

➤ LTT: Food:

➤ beef = SI 20,1 [3] ↑

➤ fish= SI 4,4 [3] ↑

➤ egg white = SI 17,0 [3] ↑

diagnostics and therapy- strategy, Pat.: G.I, ♀, 50 y.

➤ Laboratory:

➤ Metal analytics in saliva: Hg, Au, Pd ↑

➤ Type IV Sensitization on

➤ dental amalgam SI 12,6 [3] ↑

➤ gold-alloys (native) SI 9,2 [3] ↑

➤ Histamine (mast cell associated inflammation)

➤ Diamine oxidase (DAO) ↑↑

➤ Histamine-N-Methyltransferase ↓

➤ MDA-LDL (lipid peroxidation/ oxidative stress) ↑

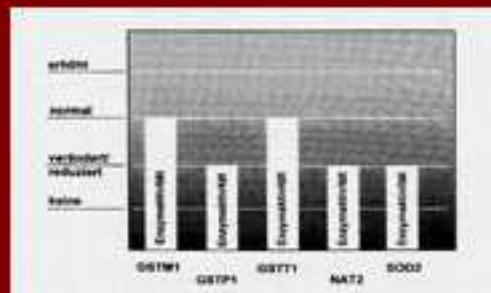
➤ ATP (impaired mitochondrial function) ↓

diagnostics and therapy- strategy, Pat.: G.I, ♀, 50 y.

Polymorphism

DAO
Histamine-N-Methyltransferase

reduced activity
reduced activity



Phase II

reduced activity

Building Biology:

- all walls and ceilings were clad in wood panels, treated with preservatives
- all floors were covered with laminate,
- in the bedroom was a cabinet of chipboard, right next to the bed
- Building Biologist verified
 - in the air:
 - dibutyl phthalate (plasticizer)
 - Formaldehyde 0.4 ppm [0.05 ppm] (laminate and chipboard)
 - in the wood panelling:
 - Lindane 240 mg/Kg [1] and
 - Pentachlorophenol 365 mg/kg [5]

diagnostics and therapy- strategy, Pat.: G.I, ♀, 50 y.

Diagnose from Clinical environmental medicine:

- **Hyperreactive bronchial system**
- **Intestinal dysbiosis therapy-refractory**

- **Severe food intolerance**
- **Silent inflammation by dental foci**

- **Toxically burdened by**
 - **dental alloplastic metals: (Hg, Au, Pd)**
 - **Plasticizer, Formaldehyde, Lindane, Pentachlorophenol**

diagnostics and therapy- strategy, Pat.: G.I, ♀, 50 y.

Diagnose from Clinical environmental medicine:

- **Type I Sensitization**
 - **Alpha-Lactalbumin, Latex, Formaldehyde**
- **Type IV Sensitization**
 - **Dental amalgam and Gold-alloys**
 - **Food: beef, fish, egg white**
- **Histamine intolerance**
 - **Depletion of Diamine oxidase (DAO)**
 - **Depletion of Histamine-N-Methyltransferase**
- **Polymorphism Detox Phase II , Histamine-Metabolism**
- **Lipid peroxidation / oxidative stress**
- **Impaired mitochondrial function**

diagnostics and therapy- strategy, Pat.: G.I, ♀, 50 y.

Therapy:

- Avoidance or at least maximal reduction of indoor pollution
- Replacement of immunologically reacting alloplastic materials (dental amalgam, other alloplastic materials)
- Optimizing nutrition by diet, under the guidance of an ecotrophologist
- Reduction of oxidative / nitrosative stress
 - Supplementation of micronutrients (Vitamins, Minerals, Enzymes)
- Regulation of intestinal dysfunction (microbiome)
- Detoxification of metals (Chelation) and lipophilic toxins (Hyperthermia)

diagnostics and therapy- strategy, Pat.: G.I, ♀, 50 y.

After 3 years of consistently therapy

- no cough any more
- no compulsive throat clearing
- extremely diminished food intolerance
- no bloating and no flatulence at all

**With the age of 53
working capacity completely regained**

**You only see
what you know**

Goethe

**To get rid of ignorance
you have to start
education-programs**

**Best effective lever for
prevention strategies is education**

Train

- **Doctors,**
 - Students at universities
 - Physicians postgraduate
- **Nurses,**
- **Architects**
- **Teachers**
 - School teachers
 - Nursery school teachers
- **Teach Children in schools**
 - **Thereby influence adults in the family**

EUROPAEM requests and claims to ISDE

Beside the ISDE statutes aims: *“To promote human health through the protection and restoration of the environment.”*

- Please also regard the burden and illnesses of the individual !
- help us, to improve the international perception of Clinical Environmental Medicine
- integrate Clinical Environmental Medicine into the work of ISDE
- ask ISDE-doctors to study Clinical Environmental Medicine
- help us to integrate expertise of Clinical Environmental Medicine into health systems and politics

Thank you for your attention



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