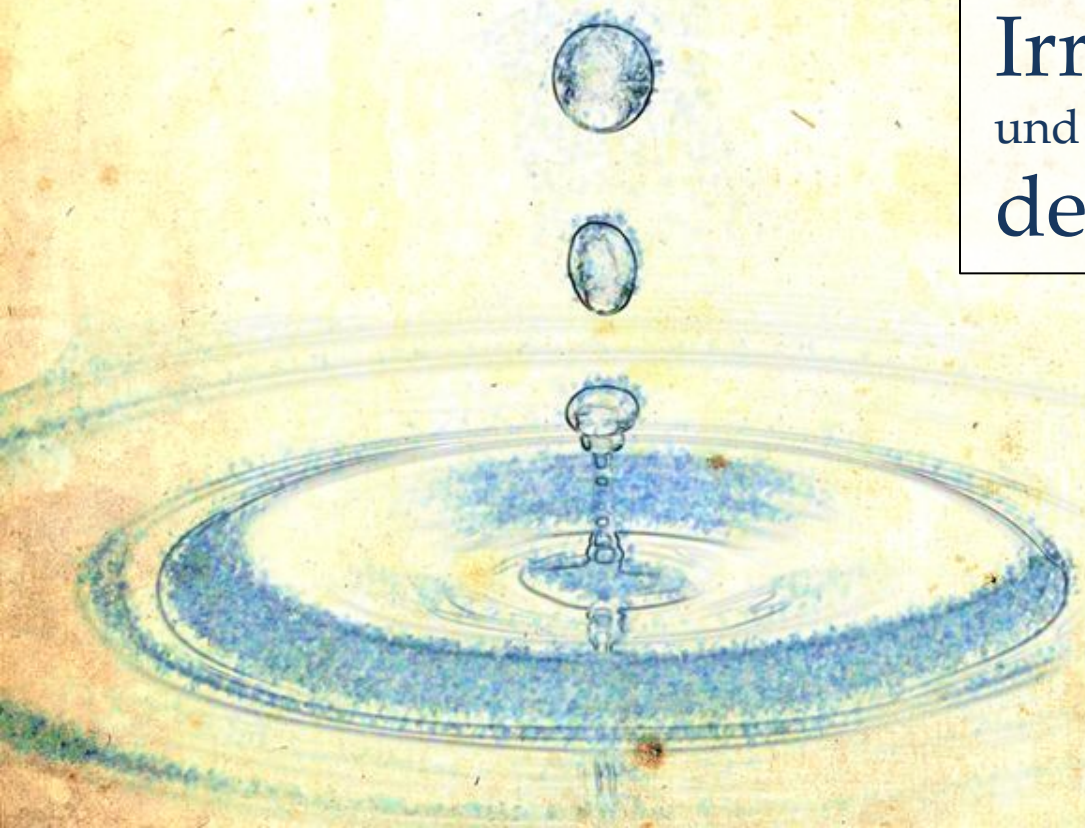
Markus Köhli
und Maarten DeKieviet
Maximilian Hartmann

Ruprecht-Karls-Universität
Heidelberg

DPG Konferenz 2015
GP 9.4

Irrtümer
und
deren Lehrsätze

z.Z. anhand des Beispieles Polywasser



„If any and every failure to fit
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Thomas Kuhn

Mechanismen der Wissenschaft

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Rationalismus

John Locke

René Descartes

Hypothese

Logik

Mechanismen der Wissenschaft

Rationalismus

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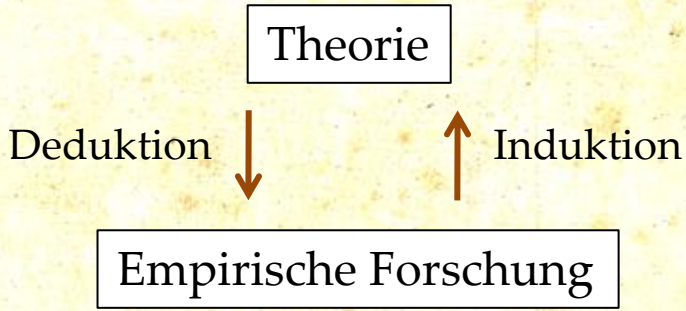
Hypothese ⟷ Logik

Empirismus

Francis Bacon

David Hume



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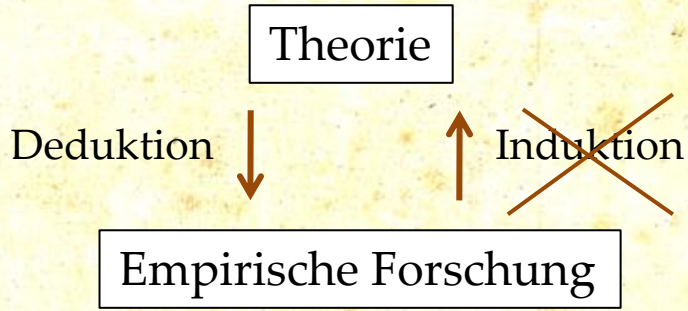

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Thomas Kuhn:

Wissenschaft als **soziale** Unternehmung

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„Paradigmenwechsel“

Mechanismen der Wissenschaft

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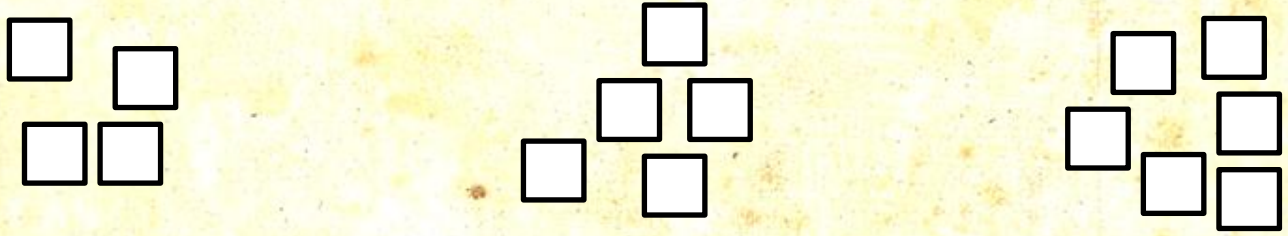

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Paradigma	Paradigma	Paradigma

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Paradigma	Paradigma	Paradigma
Andere Theorie	Andere Theorie	Andere Theorie

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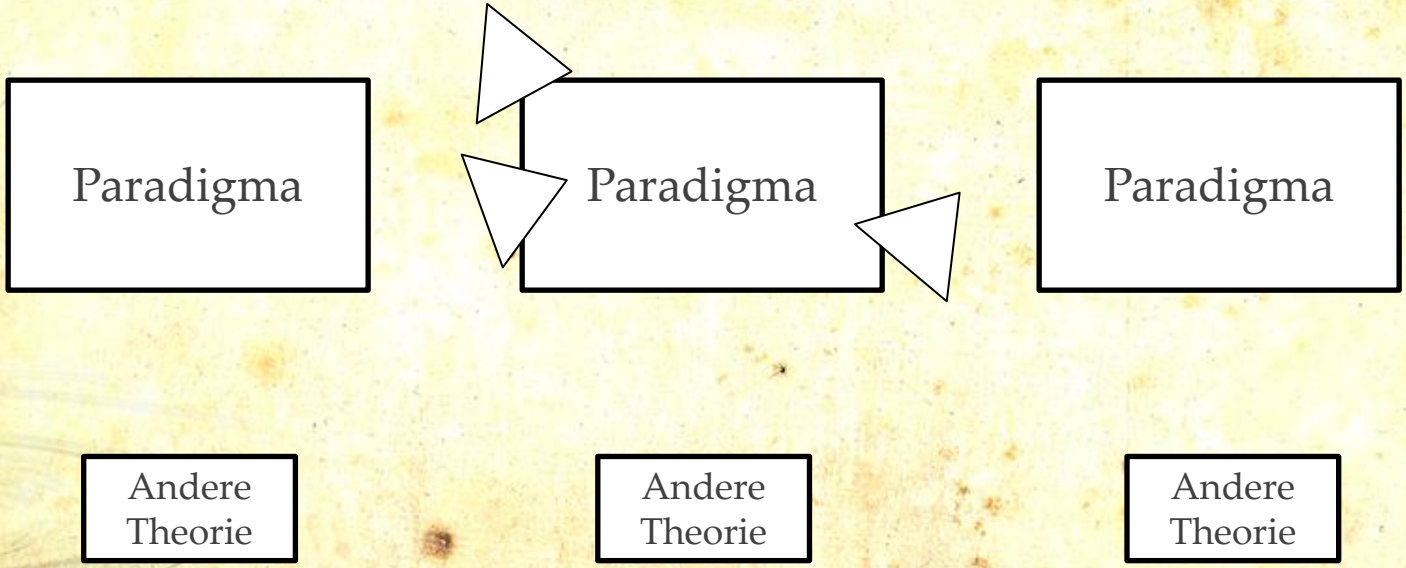

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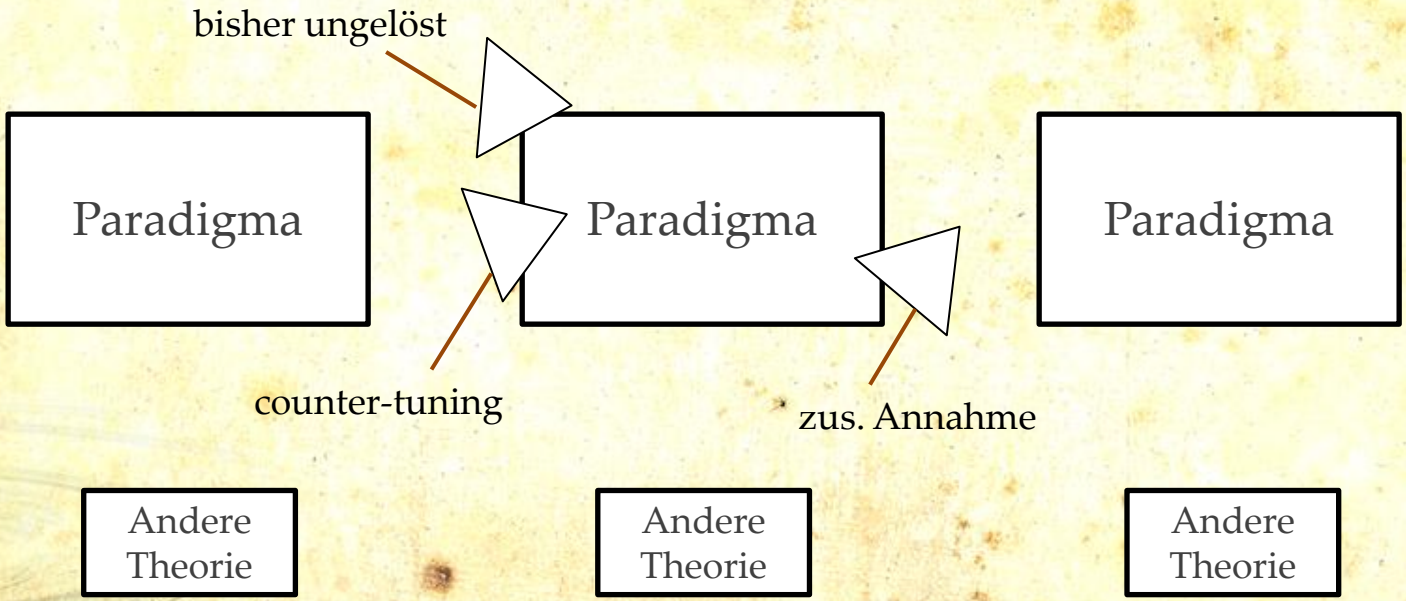

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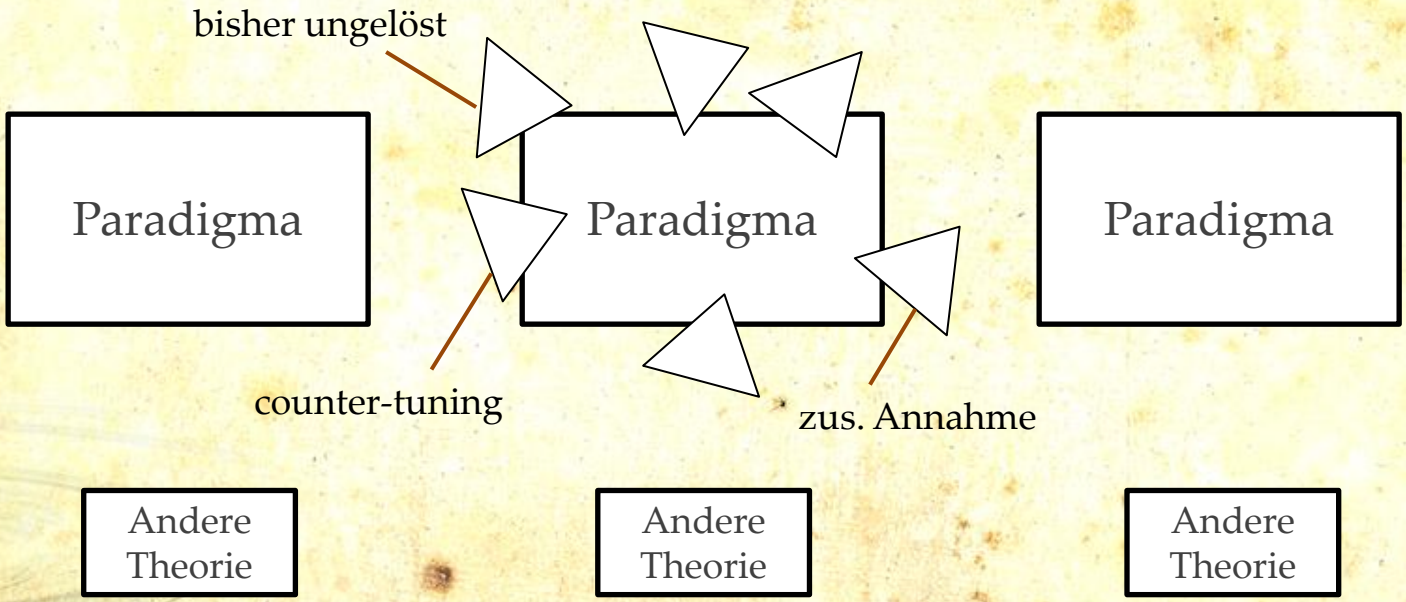

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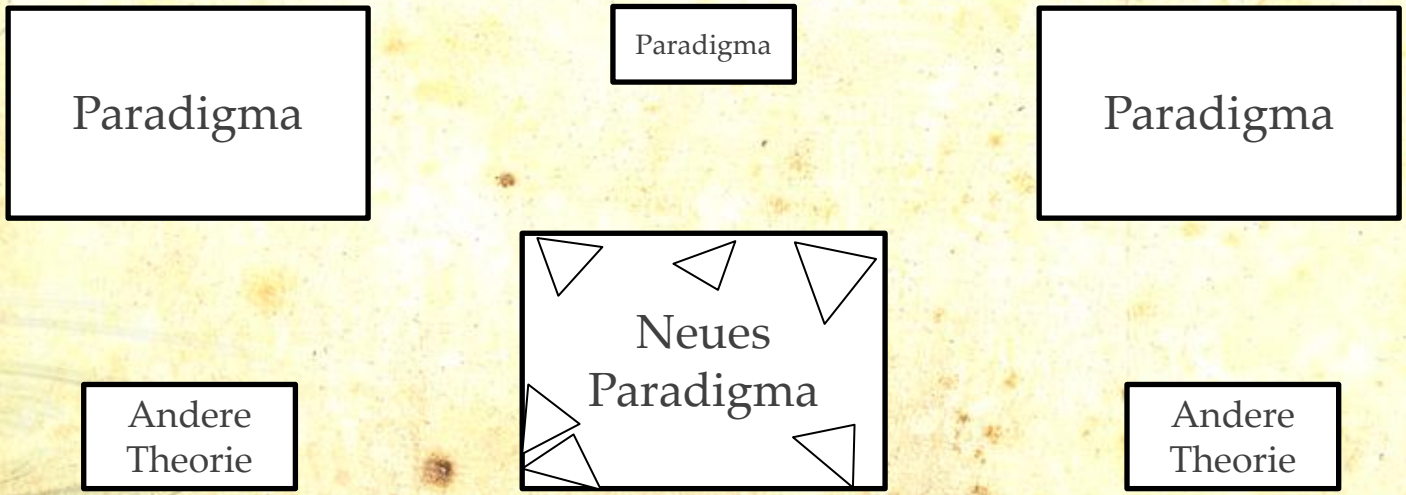

Irrtümer – Ein Überblick

Irrtümer – Ein Überblick

4-Elemente Lehre

Antike

Geozentrisches Weltbild

Trägheitsmechanik

Vormoderne

Phlogiston

Alchemie

Das Infinite

Irrtümer – Ein Überblick

Klassische Physik

Äthertheorie

Bohr‘sches Atommodell

Einstein‘s Lambda

N-Strahlen

Moderne Physik

Transurane

Kalte Fusion

Heisenbergs Weltformel

Magnetische Monopole

Polywasser

Teilchenphysik

Gravitationswellen

Doppelter Betazerfall

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„anomales Wasser“

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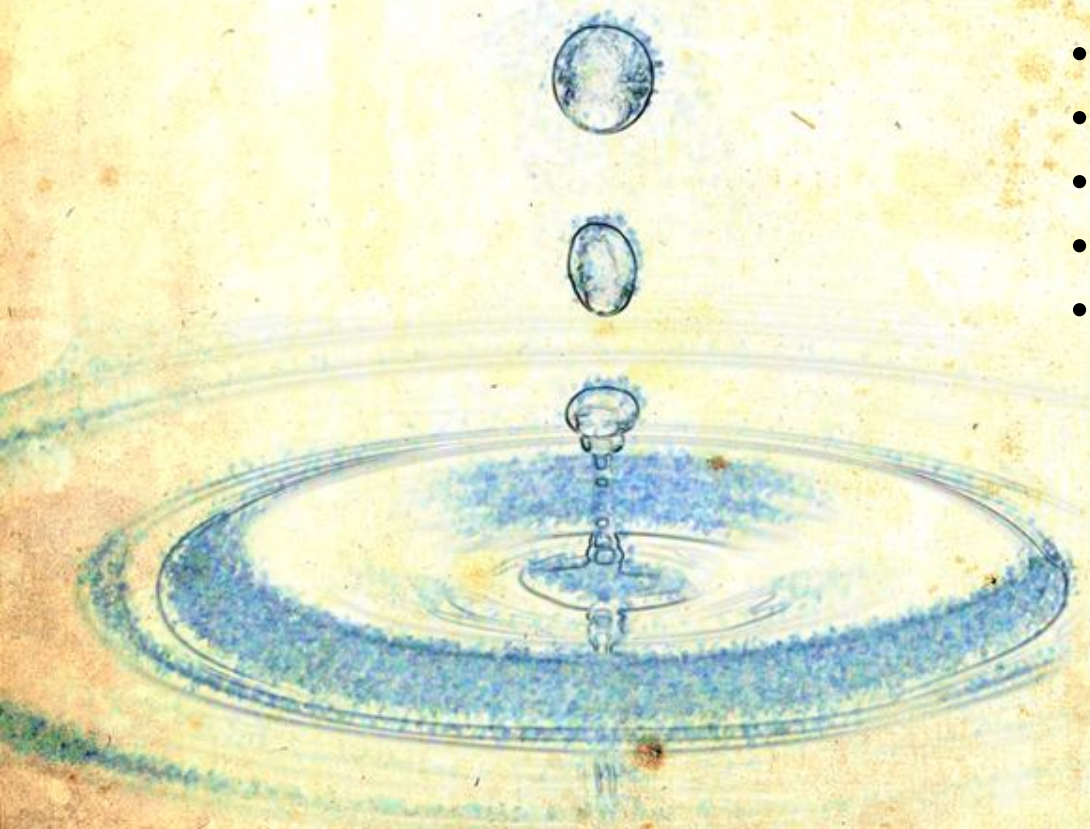
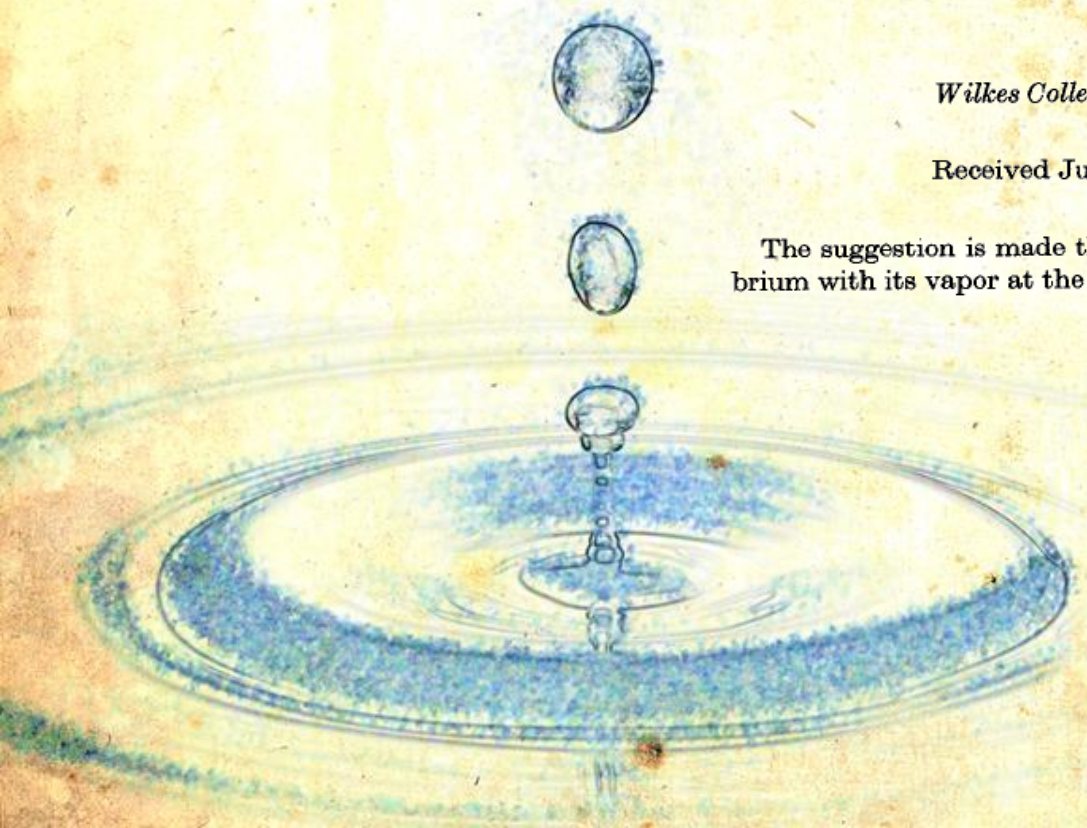


- Dampfdruck
- Viskosität
- Dichte
- Oberflächenspannung
- Brechungsindex
- Leitfähigkeit
- Thermische Ausdehnung
- ....

Polywasser



Is Venus a Polywater Planet?

F. J. DONAHOE

Wilkes College, Wilkes-Barre, Pennsylvania 18703

Received July 28, 1969; revised January 12, 1970

The suggestion is made that polymerized water (polywater) is in quasi-equilibrium with its vapor at the base of the Cytherean atmosphere.

Icarus 12 (1970)

Polywasser – in medias res

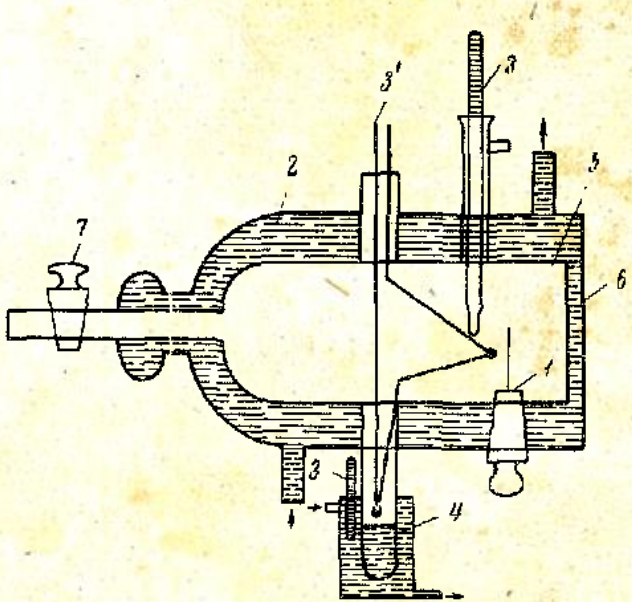
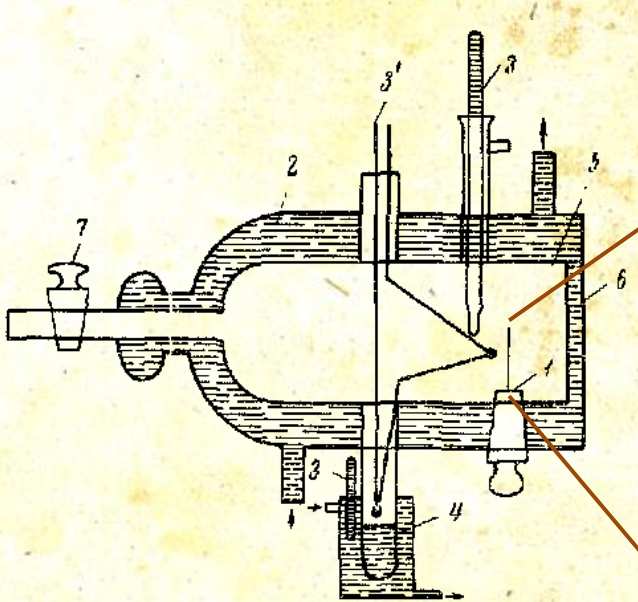


Fig. 1. Scheme of apparatus for growing columns of anomalous water.

[1]

[1] DERJAGUIN (1967), The modified state of water and other liquids, *Bulletin of the Academy of Sciences of the USSR*, 16 (10)

Polywasser – in medias res



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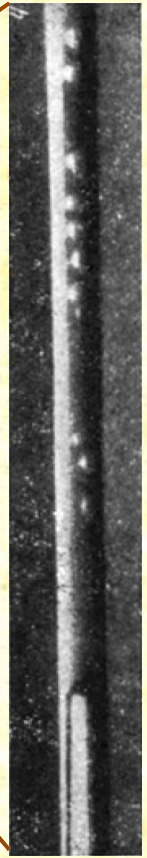

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Zeitleiste Polywasser

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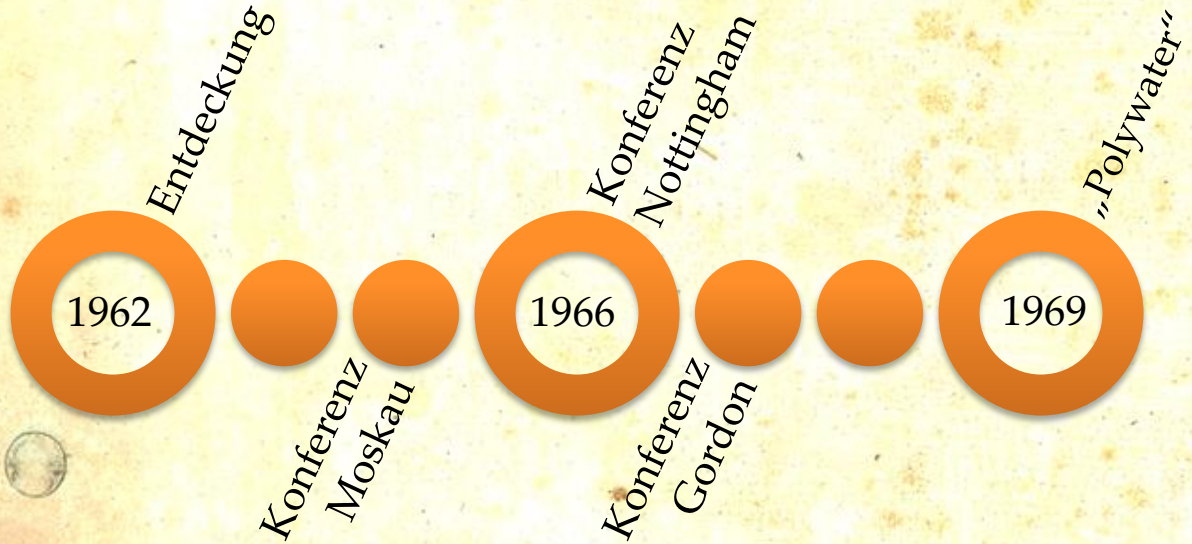
Phänomenologie

Zeitleiste Polywasser



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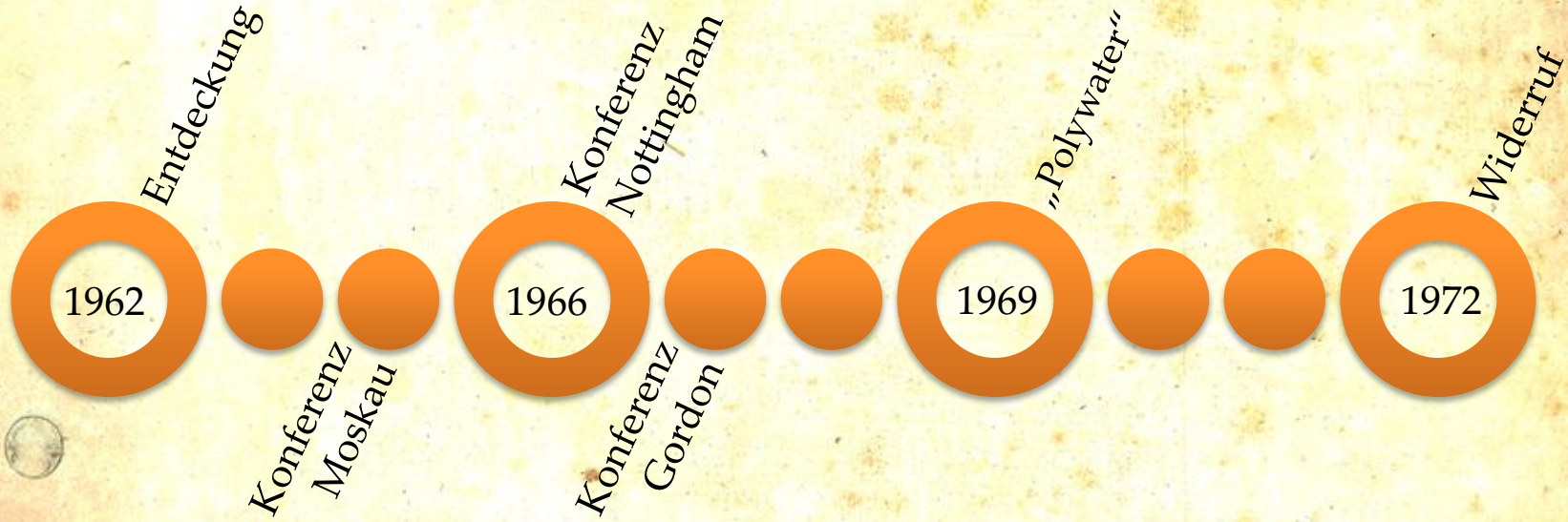

Klimax 1969

- **Im Osten**

- **Im Westen**

Klimax 1969

- **Im Osten**
  - Experimente mit dem Stoff
  - Klassische Methoden
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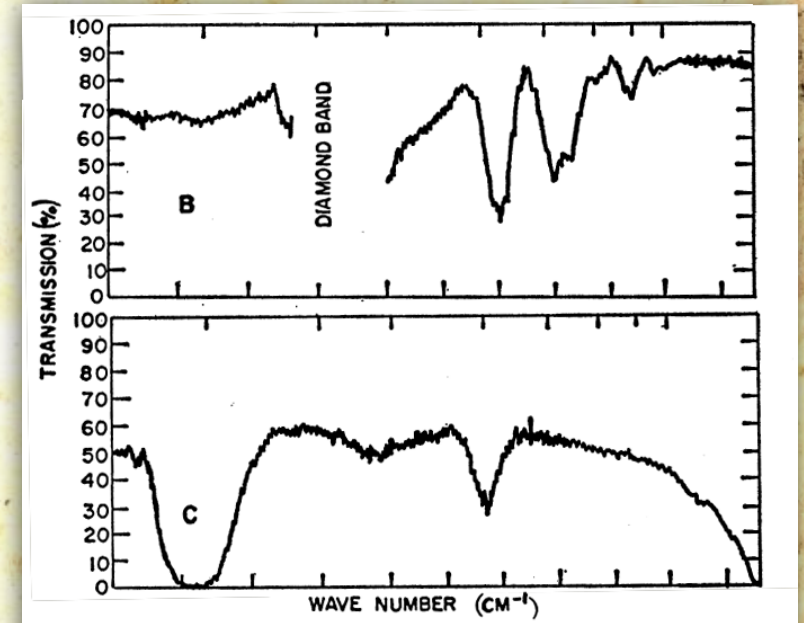
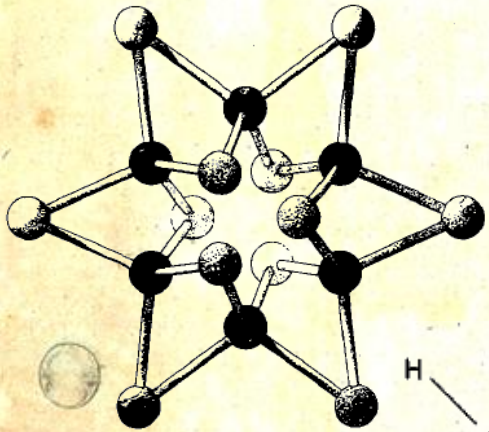


(B) Polywater spectrum reported by Lippincott *et al.* (*1*). (C) Infrared spectrum of H_2O.

A.G. LEIGA ET AL., *Science 168*

Theoretische Arbeiten



AGENO, *Theoret. chim. Acta 17*

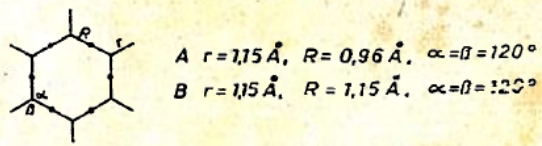
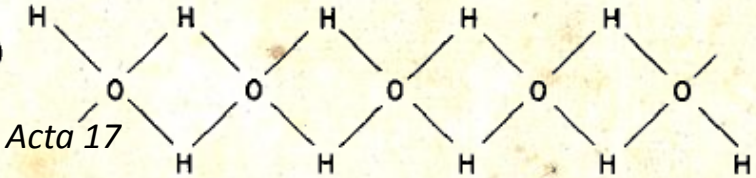


Fig. 1. Cyclic structures of polywater.

AZMAN, *Chem.Phys.Lett. 5*



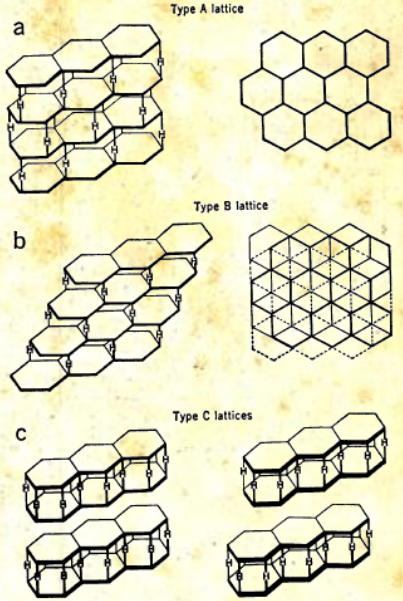


Fig. 1. The three types of anomalous water lattices. (a) Type A lattice; (b) type B lattice; (c) type C lattice.

ALLEN, KOLLMAN *Science 167*

Kritik

Theoretical Evidence Against the Existence of Polywater

We present here new results that disprove a widely discussed, and seemingly successful, structural model for polywater[1], which was derived using semi-empirical calculations.

Leland C. Allen
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Department of Chemistry,
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Received August 3, 1971.

Nature Vol. 233

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Nature Vol. 233

MASS-SPECTROMETRIC EVIDENCE AGAINST "POLYWATER"

M. DE PAZ, A. POZZO* and M. E. VALLAURI
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Gruppo Nazionale di Struttura della Materia del CNR,
Genova, Italy

Received 20 July 1970

Samples of "anomalous water" prepared from quartz capillaries exposed to water vapor have been examined with a mass-spectrometer. The spectrum showed mass triplets typical of silicon isotopes indicating that anomalous properties of samples are due to a silicic compound formed in the reaction of water vapor with quartz.

Chem.Phys.Lett. Vol. 7

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Nature Vol. 233

"Polywater" and Sweat: Similarities between the Infrared Spectra

Abstract. *The infrared spectrum of "polywater" is remarkably similar to that of sodium lactate, the primary constituent of sweat. It is proposed, therefore, that this property of "polywater," and possibly others, results from accidental biological contamination. Such contamination is consistent with chemical analyses of "polywater" samples prepared both here and abroad.*

Rousseau
Science Vol. 171

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Chem.Phys.Lett. Vol. 7

Widerruf

1972

Consequently, the anomalous properties of condensates may be explained, not by the formation of a new modification o water, as was previously supposed, but by the peculiar features of a reaction taking place between the vapour and solid surfaces in the process of condensation. Many aspects of the mechanism of formation of anomalous condensates have not yet been fully clarified. This especially applies to the formation of anomalous condensate on MgO surfaces[19,20]. Only the general features of the phenomenon are clear as yet; thorough investigation by those studying processes involving the interaction of vapours and solid surfaces is clearly required.

B. V. DERJAGUIN
N. V. CHURAEV

The Institute of Physical Chemistry,
USSR Academy of Sciences

Nature Vol. 244

Kausalitäten - Politische Ebene

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Das Polywasser-Netzwerk

Allg. Anwendung

- Biologie, Botanik
- Astrophysik, Geologie
- Industrie

Gutes Funding

- Sowiet. Akademie der Wissenschaften
- US Verteidigungsministerium
- Unilever

Mediales Interesse

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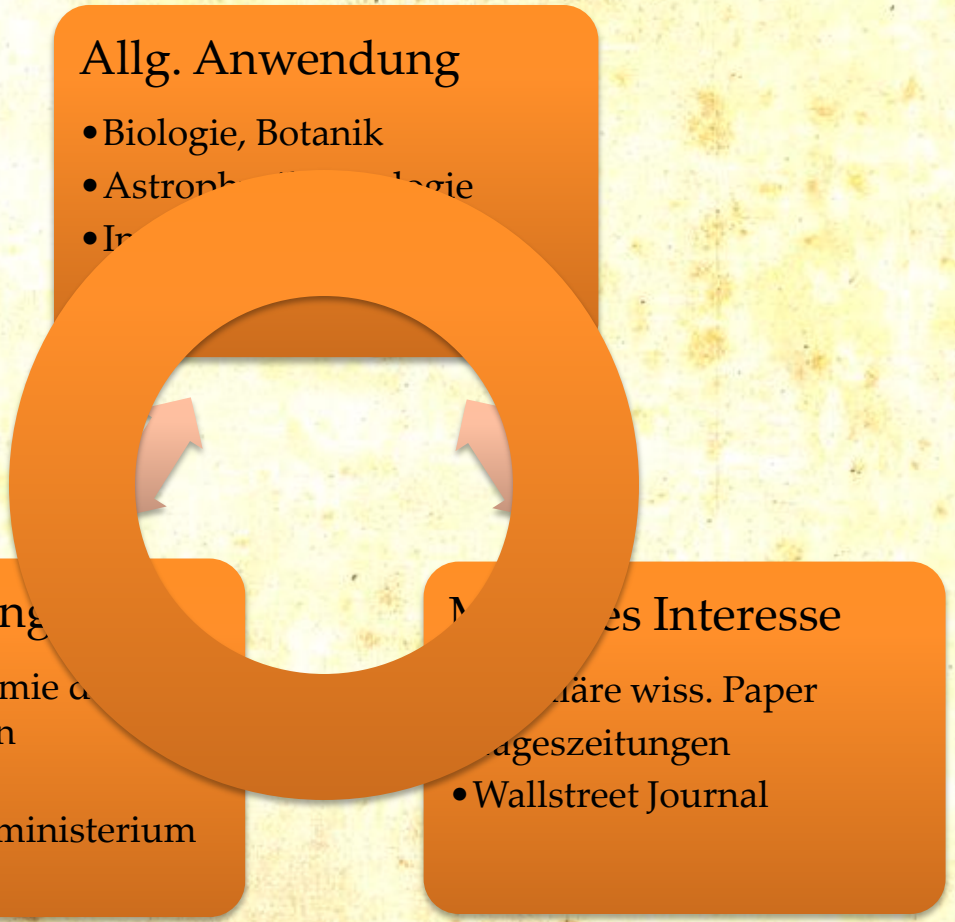
Der Polywasser-Netzwerk-Kurzschluss



Die Lehrsätze

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    „A lot to gain, nothing to lose"
  - Der Nutzen des Fehlers bleibt oft unterschätzt

Die Lehrsätze

[1]

[1] http://www.robotroom.com/Humidity/SilicaGelPacket.jpg

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