Monads: infinitessimal
Space/Time Relative
thoughts = symbols

Metaphysics:
Society of Science
father of dynamics (kinetics)

Liebniz

1. Choose a subject area and research Liebniz's contribution
   a. math, ~~philosophy~~, science, diplomat, theology, ethics, politics, law, history, philology, linguistics, computer sci.
2. Source Book on Mathematics

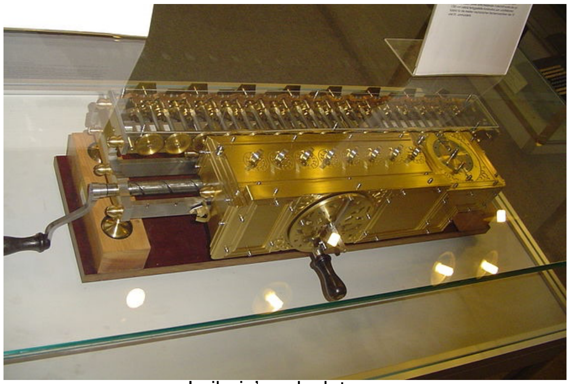
Balance/Pluralism in Europe
Limited Monarchy
Publicity to Power
"justice = constant will to act so no one has reason to complain"

Ethics - good
Justice
hurt no one
to each his due
live honorably

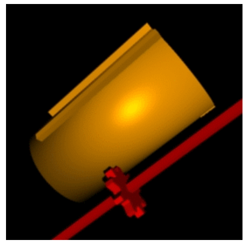
- House of Hanover
- Int. Rel. Theory (alliances)
- reconcilled Catholic/Prot.
- use art to facilitate diplomacy

Theory of God
1. Goodness ⟺ Being
2. Perfectionist
3 Hedonist (Pleasure)

• Spoke
3 Languages
• universal language
• influenced modern phil
• also toward cognition
• psycho-physical ll-ism



Leibniz’s calculator



Leibniz wheel

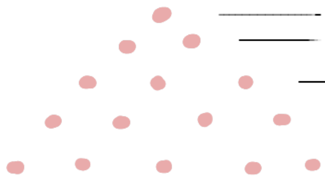
Popular Handheld Calculator

Leibniz’s Formal Logic

1. All our ideas are compounded from a very small number of simple ideas, which form the alphabet of human thought.
2. Complex ideas proceed from these simple ideas by a uniform and symmetrical combination, analogous to arithmetical multiplication.

TRIANGULAR #'s

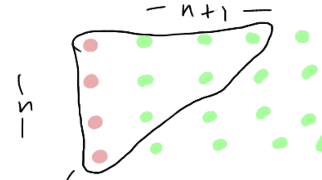
$$\frac{n(n+1)}{2}$$



$$n \longrightarrow \frac{n(n+1)}{2}$$

Liebniz Proved:

$$1 + \frac{1}{3} + \frac{1}{6} + \frac{1}{10} + \dots + \frac{1}{\left(\frac{n(n+1)}{2}\right)} + \dots = 2$$



$$\frac{1}{2}(n)(n+1)$$

$$\boxed{\begin{gathered} \frac{1}{n} - \frac{1}{n+1} \\ \frac{n+1}{(n+1)n} - \frac{n}{(n+1)n} \\ \frac{1}{n(n+1)} \end{gathered}}$$

$$S = 1 + \frac{1}{2} + \frac{1}{3} + \frac{1}{4} + \frac{1}{5} + \frac{1}{6} + \dots + \frac{1}{n} + \frac{1}{n+1}$$

$$-S = -1 - \frac{1}{2} - \frac{1}{3} - \frac{1}{4} - \frac{1}{5} - \frac{1}{6} - \dots - \frac{1}{n} - \frac{1}{n+1}$$

$$0 = -1 + \frac{1}{2} + \frac{1}{6} + \frac{1}{12} + \frac{1}{20} + \frac{1}{30} + \dots + \frac{1}{n(n+1)} + \frac{1}{n+1}$$

$$1 - \frac{1}{n+1} = \frac{1}{2} + \frac{1}{6} + \frac{1}{12} + \frac{1}{20} + \frac{1}{30} + \dots + \frac{1}{n(n+1)}$$

Take $\lim_{n \to \infty}$ $\;\frac{1}{n+1} \to 0$, $\;\frac{1}{n(n+1)} \to 0$

$$1 = \frac{1}{2} + \frac{1}{6} + \frac{1}{12} + \frac{1}{20} + \frac{1}{30} + \dots$$

} multiply by 2

$$2 = 1 + \frac{1}{3} + \frac{1}{6} + \frac{1}{10} + \frac{1}{15} + \dots$$ sum of recip of $\triangle$ #'s Liebniz's Series.