

János Bolyai and the Semmelweis-reflex

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Babits Mihály: Bolyai

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BOLYAI

„A semmiből egy uj, más világot teremtettem”
/Bolyai János levele apjához/

Isten elménket bezárta a térbe.
Szegény elménk e térben rab maradt:
a kapzsi villámölyv, a gondolat,
gyémántkorlátját még csak el sem érte.

Én, boldogolván azt a madarat
ki kalitjából legalább kilátott,
a semmiből alkottam uj világot,
mint pókhálóból sző kötél a rab.

Új törvényekkel, túl a szűk egen,
új végtelent nyitottam én eszemnek;
király gyanánt, túl minden képzeten

kirabolván kincsét a képtelennek
nevetlek, mint Istennel osztozó,
vén Euklides, rab törvényhozó.

**original
in Hungarian**

Mihály Babits: BOLYAI

„Out of nothing, a new, another world I staged.”

/Letter of János Bolyai to his father/

God confined our pure mind to space.

In this prison our poor ideas were caught:

That eager hawk, the lightning-fast high thought
could not leave this diamond-like place.

A happy bird, I perceived and made a note
of freedom outside of this diamond birdcage.

Out of nothing, a new, another world I stage;
Out of spider-webs, a jailbird spinning a rope.

My mind opened up a new, infinite space
with new laws beyond the limits of the sky.
Just like the king of an unimagined race,

I smile at you with God, as I am able to spy
and sack the treasures of this newly found world,
good Euclid, old lawmaker, caged bird.

Translated to English by [Tamás Csörgő](#)

English language editor: [Justin Frantz](#)

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**A new English
translation ...**

Mihály Babits: Bolyai

“Do nada criei um mundo novo, diferente.”

Carta de János Bolyai ao seu pai

Deus fechou no espaço o nosso intelecto
humano e preso continua ali este:
nem alcança a barreira fulgurante
do ávido açor-raio, o pensamento.

Com que inveja te via, ave feliz,
fugir o belo olhar gaiola fora:
eu transformei a teia em forte corda,
e assim do nada novo mundo fiz.

Com novas leis além do céu estreito
novo infinito abri a minha mente:
um reino além de tudo que é conceito.

Deus tem uma, eu tenho a outra parte,
roubei do absurdo o seu tesouro-mor,
te rindo, Euclides, legislador!

Portuguese translation by Ladányi-Turóczy Csilla
Palimpszeszt 15

**Portuguese
translation**

Bolyai

BABITS MIHÁLY

„*Semmiből egy új, más világot
teremtettem.*”

– Bolyai János levele apjához –

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király gyanánt, túl minden képzeten

kirabolván kincsét a képtelennek
nevetlek, mint Istennel osztozó,
vén Euklides, rab törvényhozó.

*He creado un universo nuevo, diferente,
partiendo de la nada*

–Carta de János Bolyai a su padre–

Dios cerró en el espacio a nuestra mente
y en tal prisión quedó, debilitada.
Ávido halcón, el pensamiento horada
sus muros de diamante inútilmente.

Yo, feliz como un ave que enjaulada
ve el sol, o un preso que hila tenazmente
con telarañas cuerda consistente,
un universo entero de la nada

he creado; con nuevo cielo y leyes
nuevas, y un infinito no pensado.
No hicieron tanto los más grandes reyes.

Un tesoro imposible he sonsacado
a Dios. –Euclides, te burlamos, ciego,
pues tu ley es tu cárcel y no hay ruego.

Spanish translation by Wang Wei

**Spanish
translation ...**

THE SEMMELWEIS-REFLEX

Although the Semmelweis-reflex (S-reflex) is not a physiological kind of reflex, it is nevertheless a reflex-type, automated human behaviour that can be triggered

- response comes without thinking, without conscious control

- **New information, new facts and observations are revealed,**
- **These do not fit to the currently accepted paradigm/picture/framework,**
- **New result is scientifically, reasonably proven,**
- **Creative, progressive researchers try to complete/improve the proof, but it is**
- **Rejected automatically, without investigation by (orthodox) researchers.**
- **Rejection is based on fixed norms, paradigms, frameworks of research.**
- **Persecution: mockery, bullying, withdrawal of funding, losing job, finally**
- **Outrage, leading to death.**
- **Request for minimal help/support rejected by orthodox, official scientists.**
- **Official procedures emphasized, in contrast to creative solutions .**

Better known in the English language literature and Anglo-saxon culture

In Hungarian: A FELISMERÉS megelőzte a korát / Discovery before its age

In USA: attempt to consider and to avoid the Semmelweis-reflex

New criteria in this talk: Unworthy burial – to be followed by majestic re-burial(s).

SEMMELWEIS AND THE S-REFLEX

SEMMELWEIS-REFLEX	Case of SEMMELWEIS, IGNÁC
NEW OBSERVATIONS, FACTS	Wash your hands: „childbed death” can be prevented!
COULD NOT FIT TO FRAMEWORK/PARADIGM OF HIS AGE	IF THIS WERE TRUE, then medical doctors of his age were not gentlemen, but serial killers – THIS WAS UNTHINKABLE.
SCIENTIFICALLY PROVEN RESULT (in a sense of statistical proof)	Several scientific publications (Rókus hospital, Hungary) sent to leading hospitals in Europe, but they do not react/consider the results
PROGRESSIVE RESEARCHERS, who attempt to prove the result	His goal is to save the life of mothers.
REJECTED WITHOUT DETAILED INVESTIGATION –by orthodox scientists	Their goal is to cultivate medical science, to keep positions. - Sticking to protocols established earlier, out of context.
BASED ON FIXED NORMS and BELIEFS	„MIASMA” theory: uncontrollable cosmic influence
PERSECUTION: MOCKERY, BULLYING/THREAT, LOOSING OF JOB, OUTRAGE, DEATH	In Vienna, he was ridiculed, threated, his research and work was made impossible. In Hungary, he got a job at Rókus Hospital, but without salary. At the end of his life, he was tricked to enter to a mental asylum, was captured, beaten up, died due to sepsis.
MINIMAL HELP REQUEST REJECTED by orthodox scientists	In Vienna, medical doctors did not even try to wash their hands after operations on dead bodies !
OFFICIAL PROTOCOLS EMPHASIZED	Proposal rejected due to formal reasons, without investigation
NEW CRITERIA: UNWORTHY BURIAL, FOLLOWED BY MAJESTIC REBURIAL(s)	Semmelweis was buried in Vienna in 1865. Only few were present, <u>neither family members nor colleagues attended the service.</u> His remains were transferred to Budapest in 1891. A decorated burial place in 1894... Up to now, 3 reburials, more and more majestic .

SEMMELWEIS ÉS A S-REFLEX

Die Aetiologie, der Begriff
und
die Prophylaxis
des
Kindbettfiebers.

Von

Ignaz Philipp Semmelweis,

Dr. der Medicin und Chirurgie, Magister der Geburtshilfe, o. ö. Professor der theoretischen und practischen Geburtshilfe an der kön. ung. Universität zu Pest etc. etc.

Societat.
Medicor. Pestica
et Budens.

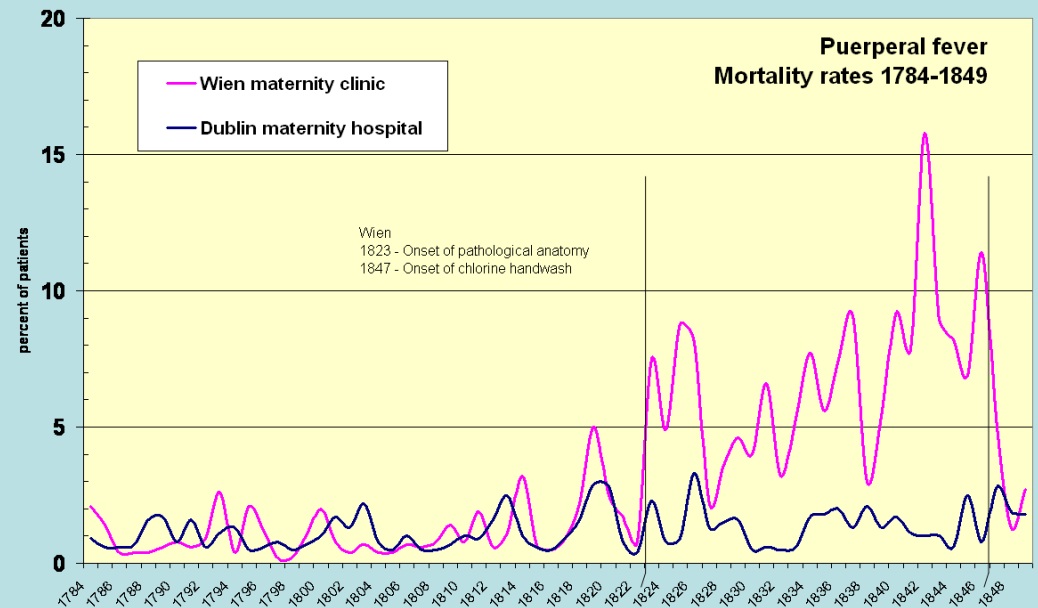
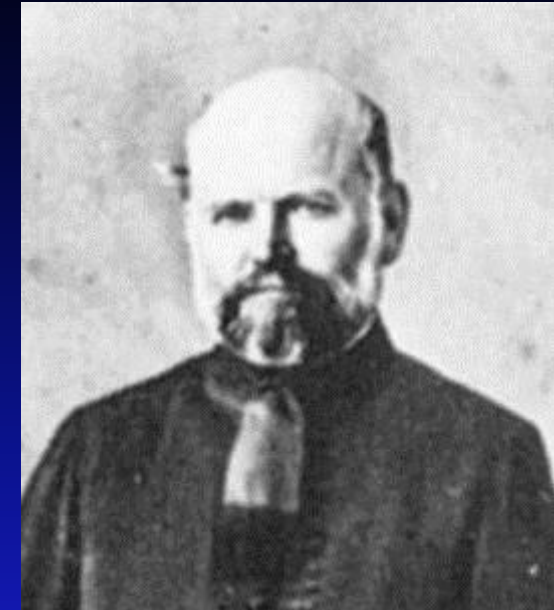


Pest, Wien und Leipzig.

C. A. Hartleben's Verlags-Expedition.

1861.

2633



LIFE OF JÁNOS BOLYAI

Born in Kolozsvár, December 15, 1802. – Passed away in Marosvásárhely, January 27, 1860.

Mathematician, military engineer, master of violin and fencing.

Son and disciple of Farkas Bolyai, professor of mathematics.

His mother was Zsuzsanna Benkő. Hungarian, Saxonian and Szekler ancestors.

His father, Farkas Bolyai was a friend of Gauss. His father, Farkas was his first math teacher.

His father became his only colleague and correspondent in the field of mathematics.

He could not study at University of Göttingen (financial problems, lack of support from Gauss).

Enrolled to the military academy in Vienna, where math was taught in the first two years only.

Interested in classical, deep and difficult problems in math.

His only scientific publication was published as an Appendix of Tentamen, the book of his father.

His Appendix remained unknown for decades, then translated to several languages.

His only proposal (the Responsio) was rejected: it was not understood by the evaluation panel.

A mathematician with broad interest (geometry, number theory, algebra, topology, languages...)

Persecution: Mocking, threat (13 duels? in one day in Vienna), Marosvásárhely: not understood.

Loosing job: He was retired – as a military engineer - at the early age of 31, due to his illness:

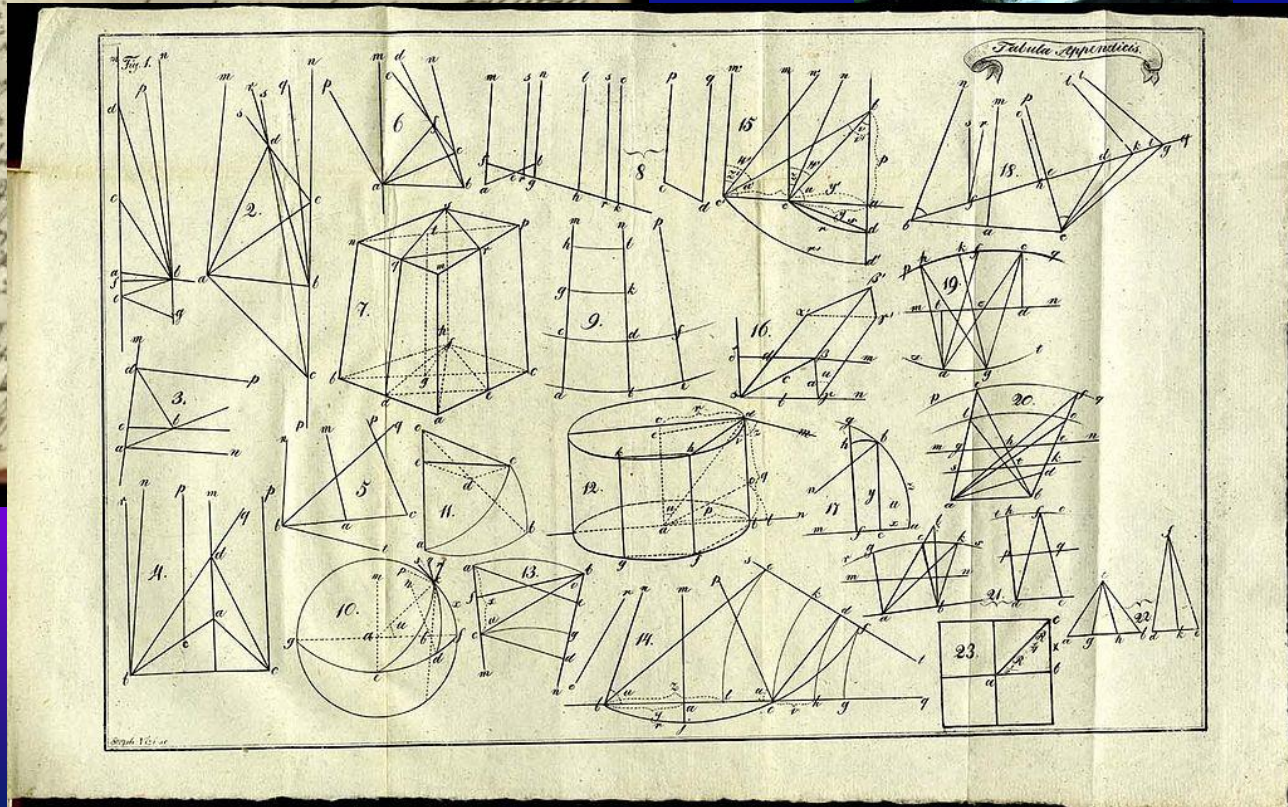
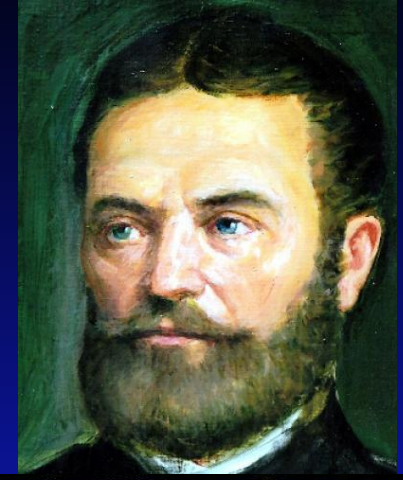
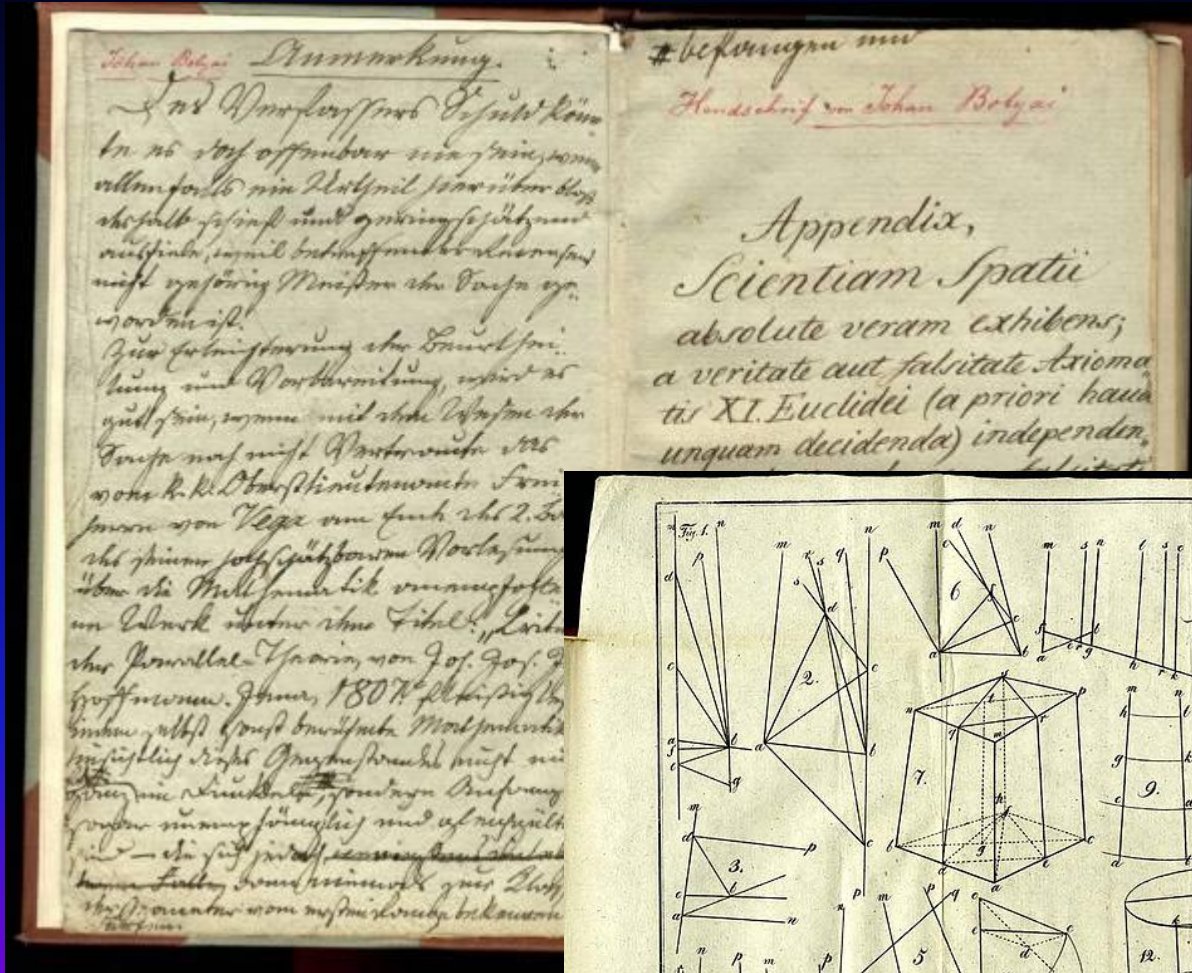
He never had a job as a mathematician.

Gauss did not reply to mails of his father (e.g on housing in Göttingen) but Gauss replied to his receipt of the Appendix: „If I were to praise it, then I would praise myself ... I had similar discoveries before, but I was not brave enough to write them down.”

BOLYAI JÁNOS AND THE S-REFLEX

SEMMELWEIS-REFLEX	CASE OF BOLYAI JÁNOS
NEW OBSERVATIONS, FACTS	New geometry can be constructed based on the negation of the axiom of parallels. „Out of nothing, another, new world I staged. – J. Bolyai”
COULD NOT FIT TO FRAMEWORK/PARADIGM OF HIS AGE	IF THIS IS TRUE, then mathematicians of his age did not find the correct path. Gauss: dangerous topic, „I did not dare to write this up.”
SCIENTIFICALLY PROVEN RESULT (in a sense of statistical proof)	APPENDIX (the only publication of Bolyai). Gauss, the leading mathematician of that age, did not acknowledge the priority of Bolyai.
PROGRESSIVE RESEARCHERS, who attempt to prove the result	Bolyai’s goal is the exploration of the new geometry
REJECTED WITHOUT DETAILED INVESTIGATION – by orthodox scientists	Goal of Gauss was to cultivate mathematics – and to keep the status quo
BASED ON FIXED NORMS and BELIEFS	2500 years old Euklidean geometry: considered without alternative. After Bolyai, only part of a broader picture, the absolute geometry.
PERSECUTION: MOCKERY, BULLYING/THREAT, LOOSING OF JOB, OUTRAGE, DEATH	Was ridiculed and laughed at, beyond his back. He was not understood, but he tolerated that patiently. Retired from military engineering service at a young (31 years old) age. At death, he was 57 years old. On death certificate: „What a pity that his great talent was buried without utilization.”
MINIMAL HELP REQUEST REJECTED by orthodox scientists	János Bolyai never had a job as a mathematician. Self-published Appendix at the cost of 1/3rd of his annual income. Gauss never invited him, not discussed with him.
OFFICIAL PROTOCOLS EMPHASIZED	His only publication was published as the Appendix of his father’s book. His only proposal, the Responsio was not understood and got rejected.
NEW CRITERIA: UNWORTHY BURIAL, FOLLOWED BY MAJESTIC REBURIAL(s)	Buried to an unmarked grave, in the ex officio presence of only two military colleagues. Neither family members, nor colleagues were present. Later, re-buried ceremoniously, to the grave of his father.

Bolyai and the S-REFLEX



SOME BREAKTHROUGHS OF J. BOLYAI

- ✓ **Appendix: absolute geometry (Euclidean and non-Euclidean)**
- ✓ **Theorems, that can be proven without reference to the Parallel Postulate**
- ✓ **Unified presentation of theorems on the Euclidean and hyperbolic plane**
 - ✓ **Last part of Appendix: Squaring a circle**
 - ✓ **Solves this ancient problem in the non-Euclidean case**
 - ✓ **Conjecture: Circle can be squared iff geometry is non-Euclidean**
- ✓ **Gives a spatial (non-Euclidean) construction on how to trisect an angle**
 - ✓ **Describes complex numbers as ordered pairs of real numbers**
 - ✓ **Discovers pseudoprimes**
 - ✓ **Raumlehre: lays the foundations of topology**
- ✓ **Proves that higher ($n > 4$) order equations have no algebraic solution**
 - ✓ **Maximalist, text as succinct as possible**
 - ✓ **Introduces the concept of geometrization of physics**
- ✓ **Discovers a connection between gravitation and curvature of space**

Thank you for your attention!

Questions?

