Suspended
IN LANGUAGE
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Suspended in Language
Niels Bohr's life, discoveries, and the century he shaped

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Chapter 1
When Niels Bohr disagreed with you—and not just mildly, but when he really thought you were nuts—he would express it in the strongest possible terms:

WE AGREE MUCH MORE THAN YOU THINK.
Harsh? Yes, but he was a tough customer from the beginning—even with his closest and lifelong friend Harald (his younger brother). As boys they sometimes played a game where they would take turns teasing each other.

...like a big old cow in army boots!

After 10 relentless minutes of Harald’s wit...

Oh Harald, stop it, stop it.

Okay, it’s your turn, then.

Um...

Good, good.
HA, I HAVE ONE: YOU...

...HAVE A DIRTY SPOT ON YOUR COAT!

OH, FORGET IT.

(HARALD HAD COME UP WITH THIS GAME, OBVIOUSLY.)

When he cared about the topic, though, Niels could be more convincing.

CRASH SMACK TH-THUMP
YOU WON'T BELIEVE! YOU WON'T BELIEVE!

WHAT IS THE MEANING OF THIS?

WE WERE DISCUSSING KIERKEGAARD, MOTHER.

*AT THIS AGE IT WAS LIKELY MÖLLER'S PHILOSOPHICAL WRITINGS, ACTUALLY.
BOHR possessed great physical strength all his life, but didn’t use it to settle philosophical differences after his grade school years. He came, after all, from a family that was "high to the ceiling."

ELLEN impressed goodness and an interest in all people upon her children, and CHRISTIAN—a university professor and physician—brought them up with an interest in science and in a home where discussing and debating IDEAS was an important part of everyday life.

M. 1881

Their first son, NIELS HENRIK DAVID BOHR, was born on October 7th, 1885.

Niels’ older sister JENNY had preceded him by two years and his brother HARALD AUGUST followed two years after.

This term, reserved by PIANES for those of high social and intellectual standing, fit CHRISTIAN HARALD LAURITZ PETER EMIL BOHR and ELLEN BOHR (née ADLER) perfectly.
Niels lived and worked in Denmark his whole life, so like fellow Dane Hans Christian Andersen, he could say:

"In Denmark I was born, "Tis there my home is, from there my roots, from there my world extends."

This makes Bohr quite unlike so many of his fellow scientists who ended up living far away from their original homes.

At Niels' birth in 1885 Denmark was Europe's oldest kingdom. But it had grown progressively smaller since the days of the Kalmar Union of 1397, which combined Denmark, Norway and Sweden under the Danish Queen Margrete I.
Sweden had broken away in 1523, and later wars gave up even more territory to the Swedes.

Norway left in 1814.

And in 1864 Denmark lost roughly 1/3 of its remaining land (not counting Greenland—most people don’t!) and 1/3 of its population when Otto von Bismarck’s troops took this last chunk by force on behalf of the German Confederation.
So, Young Niels was born into a small country, still humiliated by a crushing defeat just over twenty years before. The official reaction?

"Outward losses must be compensated by inward gains."

A philosophical policy statement worthy of Denmark’s most famous prince, but very much not fictional.

With it, the Danish government stepped off center stage in world politics, becoming...

The undiscovered country from whose bound 0 traveller returns...

Hey, wait!

In 1885, Queen Victoria was still on the throne, and most of the politicians who would shape Niels’ world were either very young or (in the case of Hitler, Mao, and Hirohito) not yet born.
THE TIMES WERE EQUALLY INTERESTING IN THE ARTS...

ENOUGH POLITICS!

"ALL KINGS IS MOSTLY RAPSCALLIONS."

THAT'S FROM HUCK FINN, PUBLISHED A YEAR BEFORE NIELS' BIRTH.

TWAIN (WHOSE WRITING BORH LOVED IN HIS LATER YEARS) IS AT HIS PEAK, AS IS WILDE.

LEAVES OF GRASS, IMPORT OF BEING EARNE

JUNGLE BOOK

MELVILLE AND WHITMAN ARE STILL AROUND AND KIPLING HAS JUST BEGUN TO MAKE HIS MARK.

OTHERS ARE A FEW YEARS FROM THEIR PRIME:

H.G. WELLS IS 19, ROBERT FROST IS 11, JAMES JOYCE IS 3, KAFKA IS 2, AND FRANK LLOYD WRIGHT IS 16.

TCHAIKOVSKY IS STILL WORKING, THOUGH HE HASN'T FINISHED ONE OF HIS MOST FAMOUS PIECES. DVORAK, BRAHMS, VERDI, AND GILBERT & SULLIVAN ARE ALL ACTIVELY COMPOSING AS WELL.
ON THE VISUAL SIDE, AT THE TURN OF THE 20th CENTURY, ASIAN ART IS JUST BECOMING INFLUENTIAL IN THE WESTERN WORLD.

DEGAS, MONET, CEZANNE AND MANY OTHER IMPRESSIONISTS ARE ACTIVE...

BUT JACKSON POLLOCK, GEORGIA O'KEEFE, AND NORMAN ROCKWELL AREN'T YET BORN, WHILE PICASSO IS ONLY 4.

AND I STILL HAVE BOTH MY EARS.
So, this thoroughly modern man, known to his peers (behind his back) as the Pope of Atomic Physics, was born in what the Chinese would call interesting times, and entered a very different world from the one he left 77 years later.

No automobiles drove the Copenhagen streets of his youth, no airplanes flew overhead.
There were no movies either, since the Lumière brothers won't invent the motion picture camera until 1895.

And forget cell phones and CDs; after all, the telephone is only nine years old and the phonograph is even newer.

But thanks to their father, Niels and Harald did have soccer—or football, as it's called in most of the world.

Prof. Christian Bohr had founded the University of Copenhagen's Akademisk Boldklub and both boys played. Niels defended goal...
YOU NEED TO COME OUT OF THE GOAL MORE QUICKLY, NIELS.

THOUGH AS A SECOND STRINGER.

HARALD PLAYED HALFBACK!!!
...and led the 1908 Danish Olympic team to Denmark's first silver medal.

Harald often seemed a step ahead of Niels. He completed his master's thesis well before his older brother for instance.*

With his whole team on hand to assure victory here as well.

* Not that Niels was a bad student, per se. See "Apocrypha" on page 277 for one possible reason why it took Niels so long to graduate.