

Suspended IN LANGUAGE

**Niels Bohr's life,
discoveries, and the
century he shaped**

Jim Ottaviani

AND

Leland Purvis



WITH

Jay Hosler

Roger Langridge

Steve Leialoha

Linda Medley

Jeff Parker



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IN LANGUAGE

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Suspended in Language

Niels Bohr's life, discoveries, and the century he shaped

Written by Jim Ottaviani
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Linda Medley, and Jeff Parker



SUSPENDED IN LANGUAGE:
NIELS BOHR'S LIFE, DISCOVERIES, AND THE CENTURY HE SHAPED

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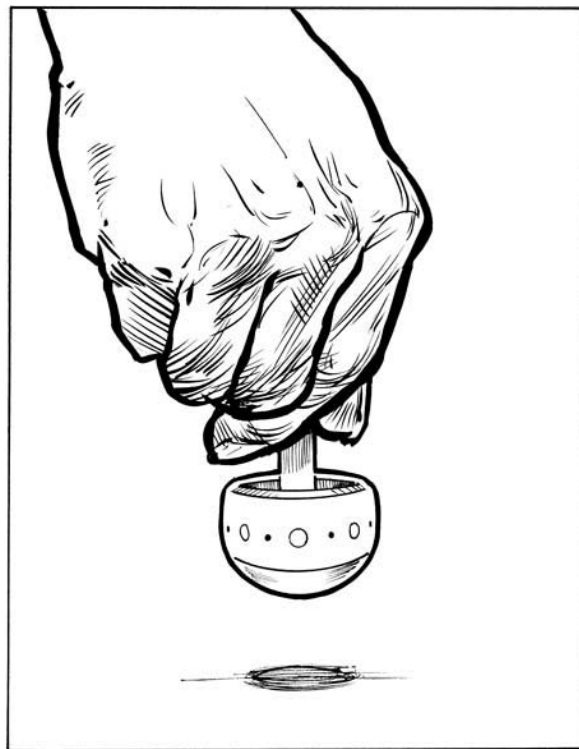
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Chapter 1



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:



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.





WHEN HE CARED ABOUT THE TOPIC, THOUGH, NIELS COULD BE MORE CONVINCING.

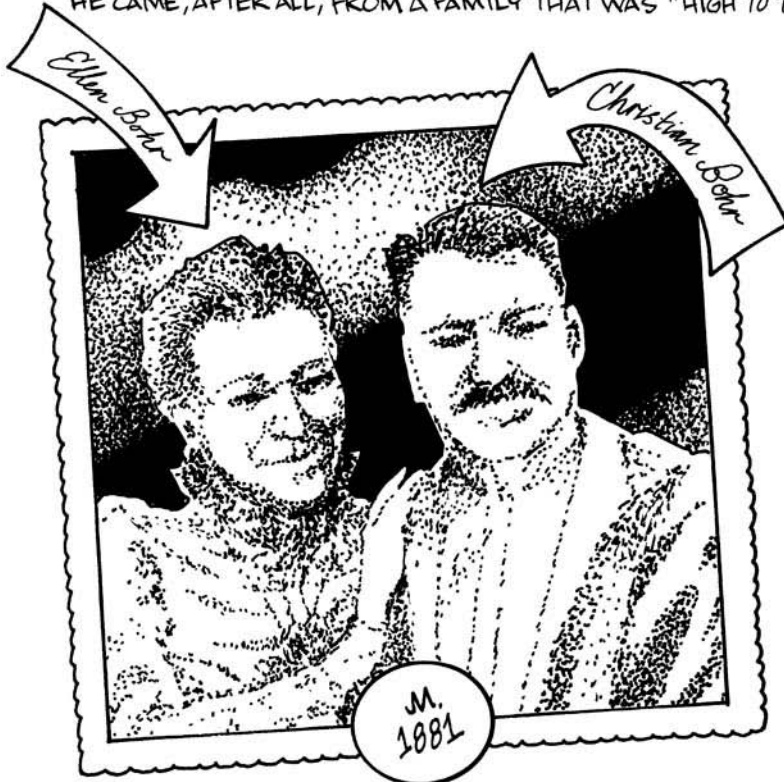


CRASH
SMACK
TH-THUMP



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."



THIS TERM, RESERVED BY PANES FOR THOSE OF HIGH SOCIAL AND INTELLECTUAL STANDING, FIT **CHRISTIAN HARALD LAURITZ PETER EMIL BOHR** AND **ELLEN BOHR (NEE ADLER)** PERFECTLY.

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.

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.



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."

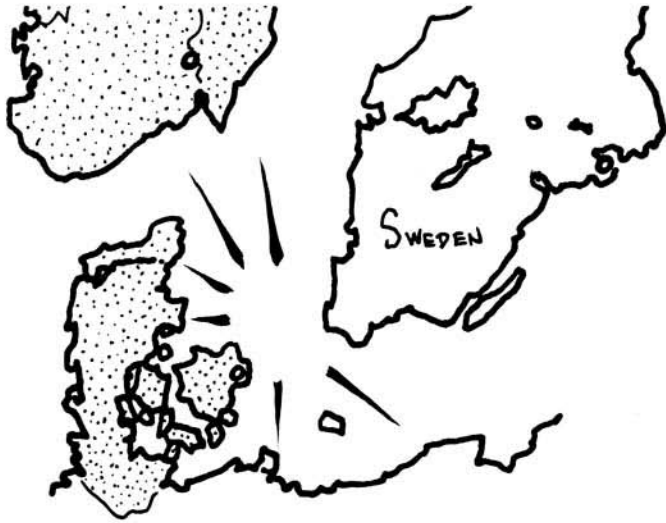


THIS MAKES BOHR QUITE UNLIKE SO MANY OF HIS FELLOW SCIENTISTS WHO ENDED UP LIVING FAR AWAY FROM THEIR ORIGINAL HOMES.

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?



A PHILOSOPHICAL POLICY STATEMENT WORTHY OF DENMARK'S MOST FAMOUS PRINCE, BUT VERY MUCH NOT FICTIONAL.

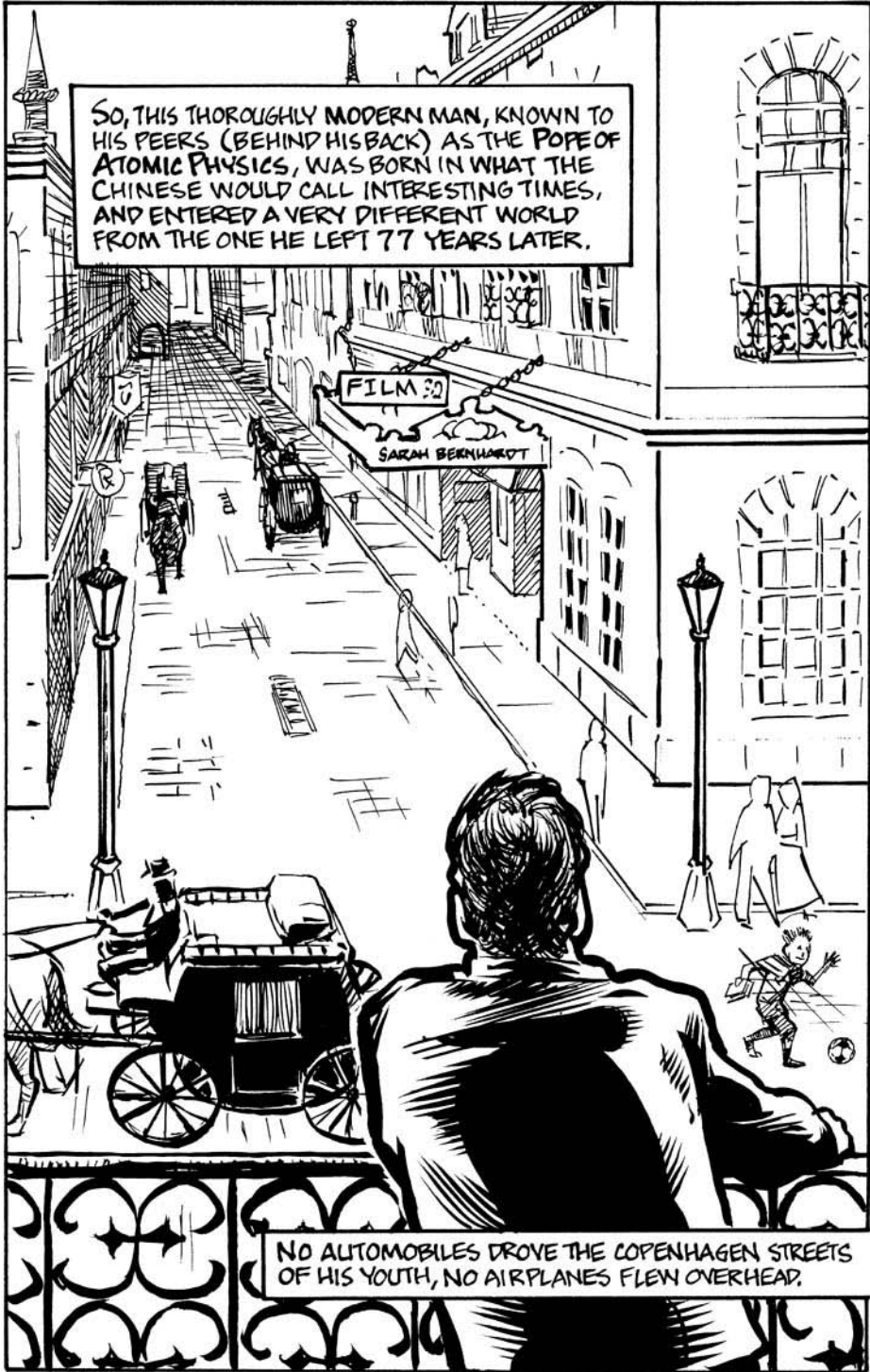
WITH IT, THE DANISH GOVERNMENT STEPPED OFF CENTER STAGE IN WORLD POLITICS, BECOMING...



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.







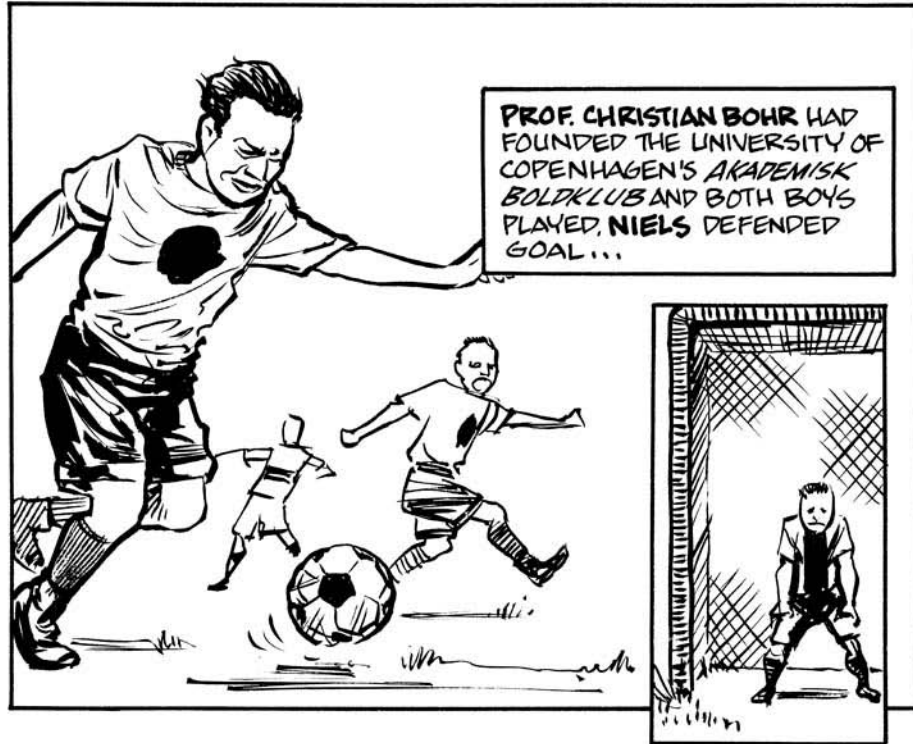
SO, THIS THOROUGHLY MODERN MAN, KNOWN TO HIS PEERS (BEHIND HIS BACK) AS THE POPE OF ATOMIC PHYSICS, WAS BORN IN WHAT THE CHINESE WOULD CALL INTERESTING TIMES, AND ENTERED A VERY DIFFERENT WORLD FROM THE ONE HE LEFT 77 YEARS LATER.

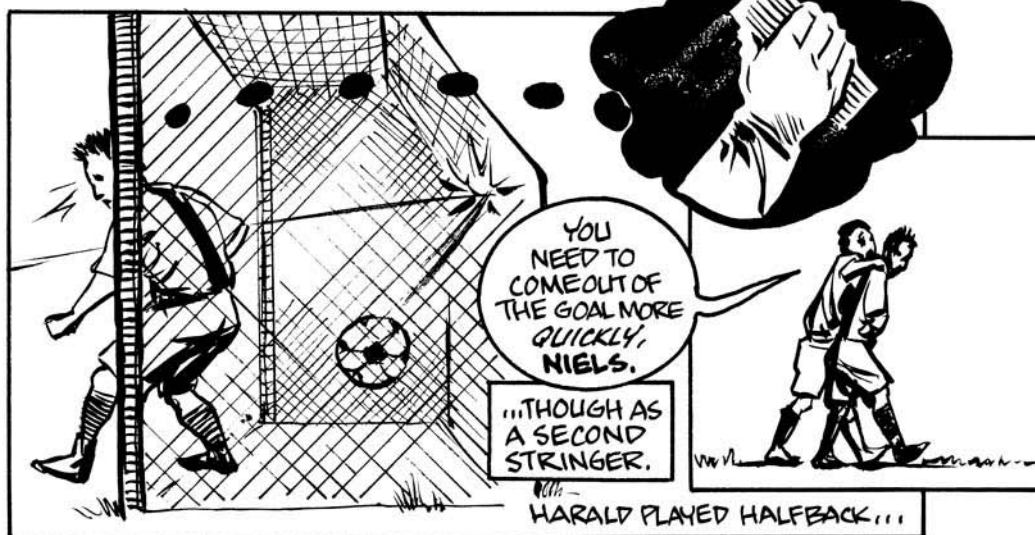
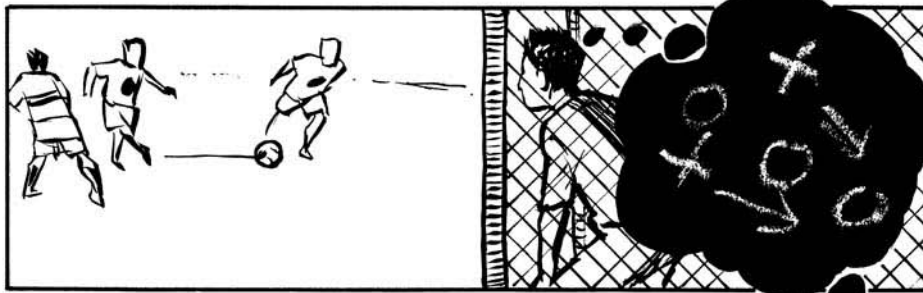
NO AUTOMOBILES DROVE THE COPENHAGEN STREETS OF HIS YOUTH, NO AIRPLANES FLEW OVERHEAD.



AND FORGET CELL PHONES AND CD'S; 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.







* 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.