

# Niels Bohr and Quantum Mechanics

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Why everything in life is simultaneously both a Blessing and a Curse.

## From the Rosh Hashanah Reform Jewish Prayer Book

Physicist NIELS BOHR said that he came upon the complementarity principle of quantum mechanics when "he thought of the impossibility of considering his son simultaneously in the light of love and in the light of justice, the son just having voluntarily confessed that he had stolen a pipe from a local shop. His brooding set him to thinking about the vases and faces in the trick figure-ground pictures: you can see only one at a time. And then the impossibility of thinking simultaneously about the position and the velocity of a particle occurred to him."

Niels Bohr found himself incapable of viewing his son's acts simultaneously through the prisms of justice and love. He could be an affectionate father, inclined to forgive, and he could be an objective, fair-minded judge, aware that wrongdoing must have consequences - but he could not be both at the same time. Human beings are inherently limited in their perspective. Yet in calling God Avinu Malkeinu (literally, "our father, our king"), we imagine a power in the universe that seamlessly unites infinite love, understanding, and forgiveness with absolute fairness and objective assessment of our virtues and flaws.

On Rosh Hashanah we are called to judge ourselves with love; to love our-selves, and also to face the truth about our short comings and grave misdeeds. In our self-scrutiny we strive to emulate the One before whom we stand at this season: the One who cannot be fooled by evasions or excuses; the One to whom we are responsible and account able; the One who cherishes us for who we are and all we can become.

Thus tradition bids us approach this day with both solemnity and joy, knowing that we will contemplate matters of life and death; and tradition reminds us, as well, that today we celebrate the world's creation and our own moral rebirth.

And why Niels Bohr is cited in the Rosh Hashanah Reform Jewish Prayer Book

See: [https://en.wikipedia.org/wiki/Niels\\_Bohr](https://en.wikipedia.org/wiki/Niels_Bohr)

Bohr was born in [Copenhagen](#), Denmark, on 7 October 1885, the second of three children of [Christian Bohr](#),<sup>[1][2]</sup> a professor of physiology at the University of Copenhagen, and Ellen Adler Bohr, who came from a wealthy [Danish Jewish](#) family prominent in banking and parliamentary circles.