



Robert Millikan (1868-1953)

His Religious Life and Thought

- Let me then henceforth use the word God to describe that which is behind the mystery of existence and that which gives meaning to it. I think you will not misunderstand me, then, when I say that I have never known a thinking man who did not believe in God.
- “A Scientist Confesses His Faith,” (1923), 25

- I do not see how there can be any sense of duty, or any reason for altruistic conduct, which is entirely divorced from the conviction that moral conduct, or what we call goodness, is somehow or other worthwhile, that there is Something in the universe which gives significance and meaning, call it *value* if you will, to existence; and no such sense of value can possibly inhere in mere lumps of dead matter interacting according to purely mechanical laws.
- *The Autobiography of Robert A. Millikan* (New York: Prentice-Hall, 1950), 287

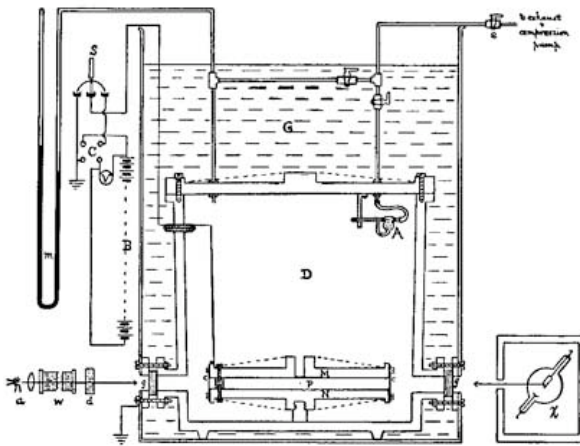
Scopes Trial (1925)

- In 1925, when the *Scopes* trial took place, Robert Andrews Millikan was probably the most famous scientist in the United States



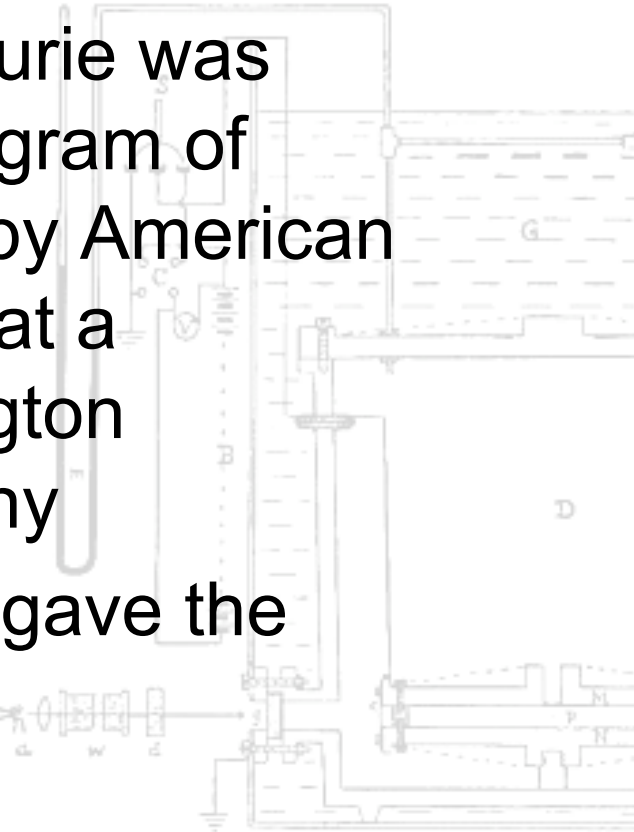
Millikan as Nobel Laureate

- The second American to receive the Nobel Prize for Physics (1923)



Marie Curie honored (1921)

- Marie Curie was given a gram of radium by American women at a Washington ceremony
- Millikan gave the address



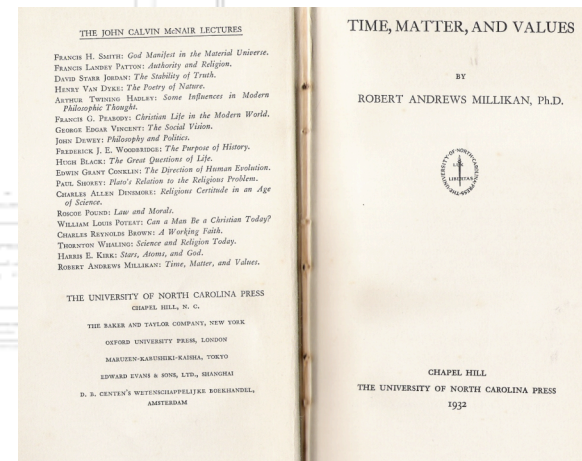
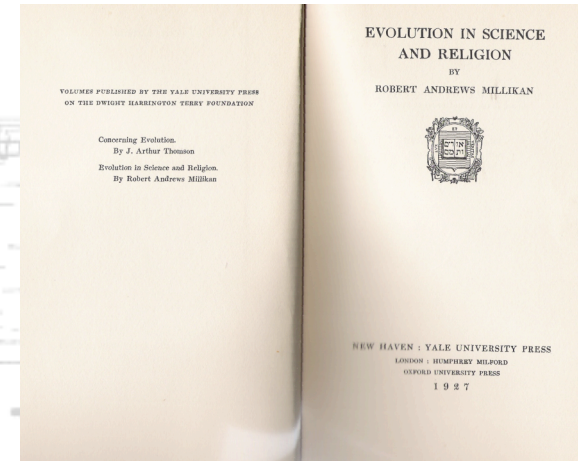
Millikan to Caltech (1921)



- Millikan left a professorship at the University of Chicago to become *de facto* president of the newly-renamed California Institute of Technology
- He took the school to greatness

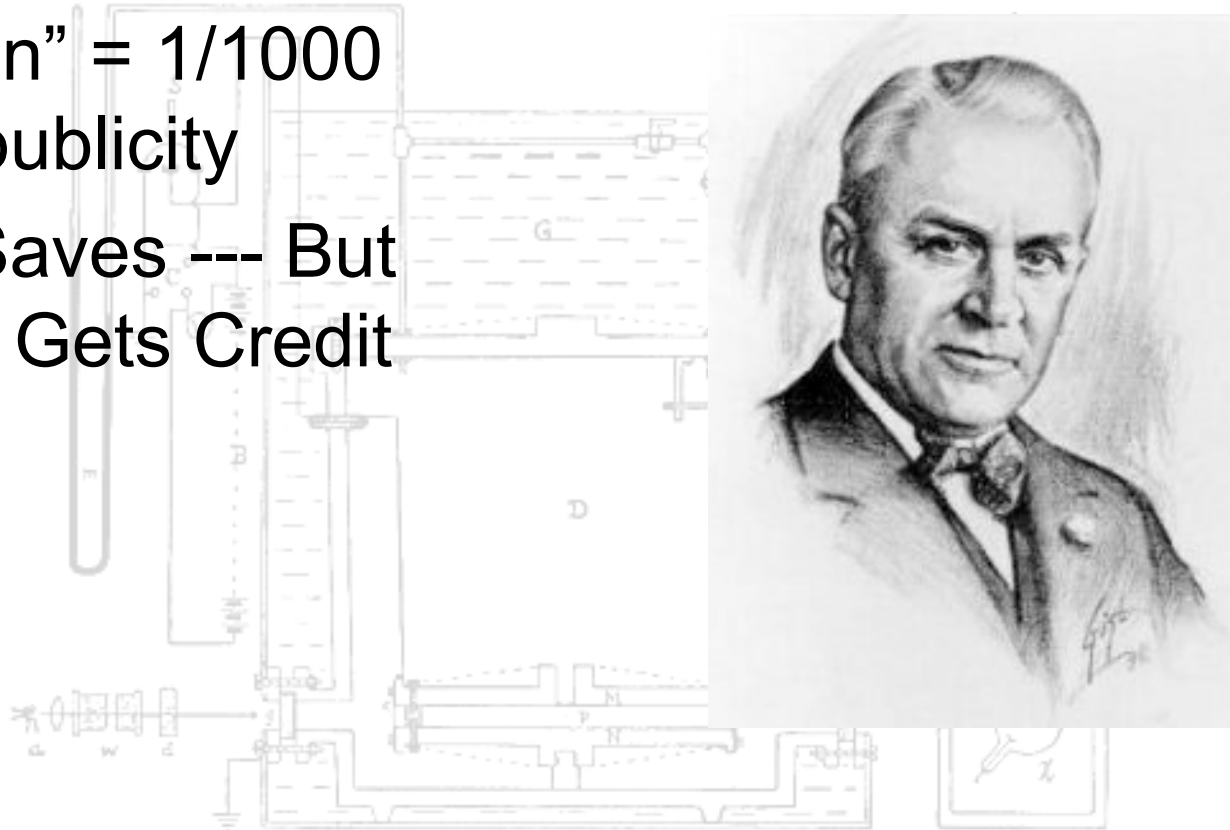
Prestigious Lectures

- Terry Lectures at Yale
- *Evolution in Science and Religion* (1927)
- McNair Lectures at North Carolina
- *Time, Matter, and Values* (1932)

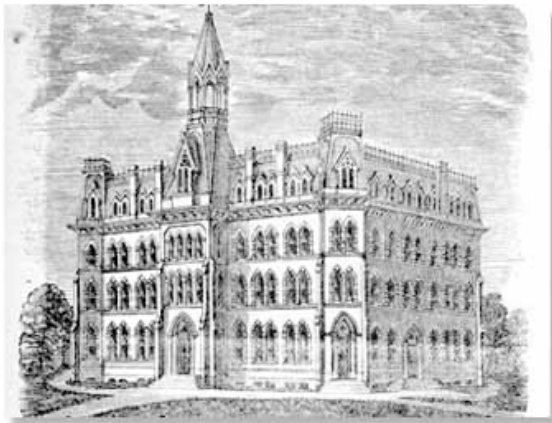


Jokes at Caltech

- “milli-kan” = 1/1000 unit of publicity
- Jesus Saves --- But Millikan Gets Credit

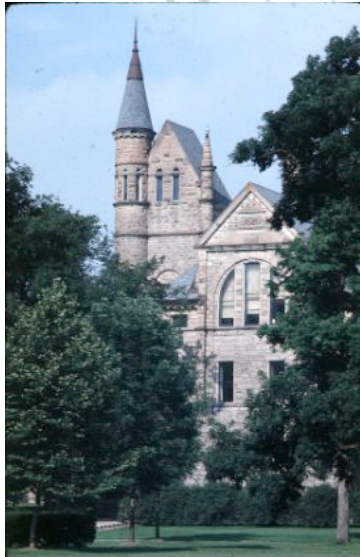


Oberlin College, Ohio



- When Millikan arrived on campus, Oberlin was in the midst of a sea change in its institutional identity.
- Moving away from an egalitarian evangelical college stressing personal salvation and Christian service, Oberlin was gradually becoming a more academically rigorous institution stressing individual excellence and open inquiry that no longer expected all faculty to espouse orthodox evangelical convictions.

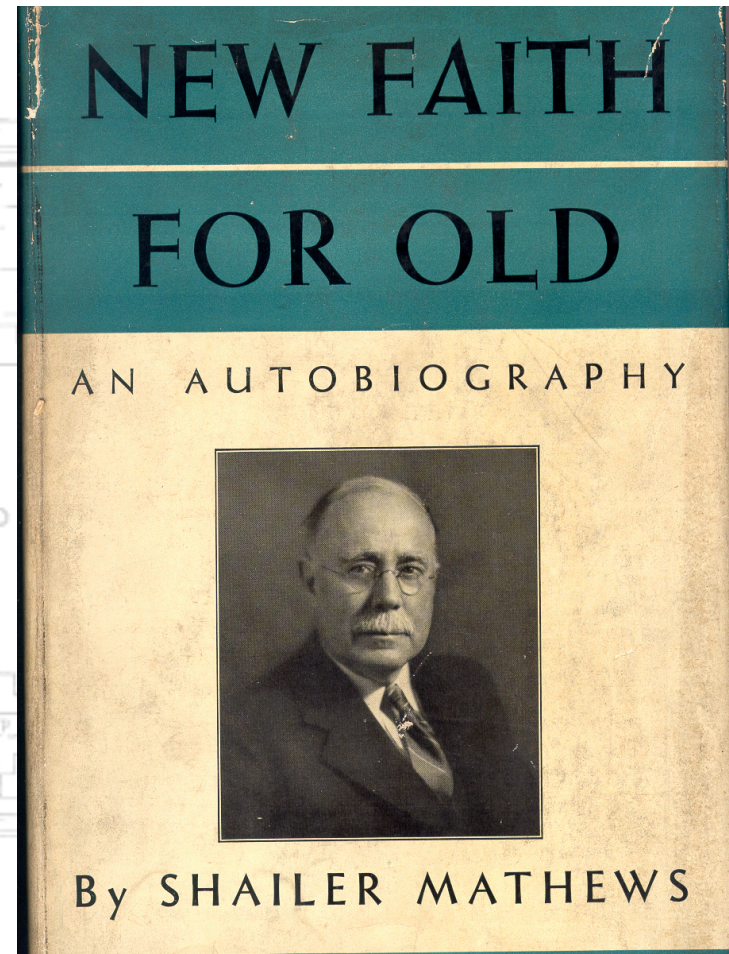
Oberlin College, Ohio



- “Evidences of Christianity,” taught by John Millott Ellis.
- Ellis taught that evolution is not atheistic, although it did “put the agency of God a little farther back than the old theory put it.”
- Christianity leads us “to test our science & philosophy by their bearings upon human welfare & the idea that the universe is the effect of the design of a good Creator.”

Millikan as religious modernist: What about God?

- Millikan relates a story about Shailer Mathews. When asked whether he believed in God, Mathews replied, “That, my friend, is a question which requires an education rather than an answer.”



Millikan as religious modernist

- Neighborhood Church, Pasadena, California
- A “union” church as he described it
- Millikan was highly instrumental in establishing this church and choosing its pastors

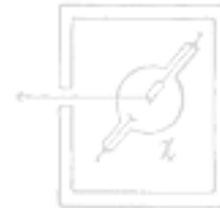


Millikan as religious modernist

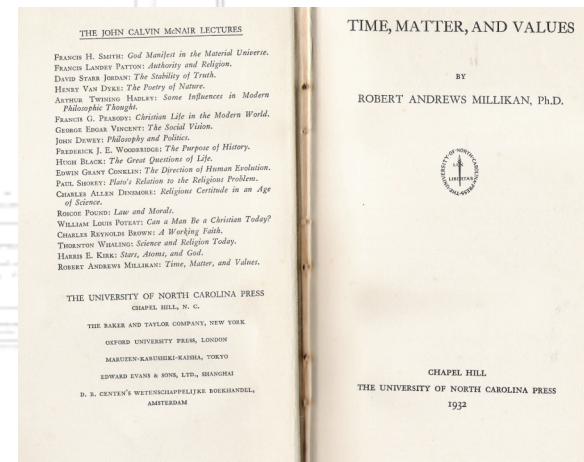
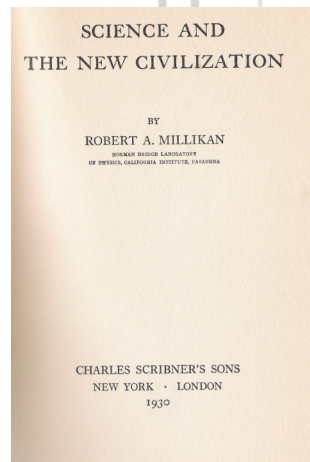
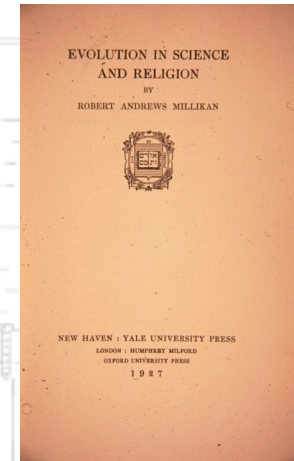
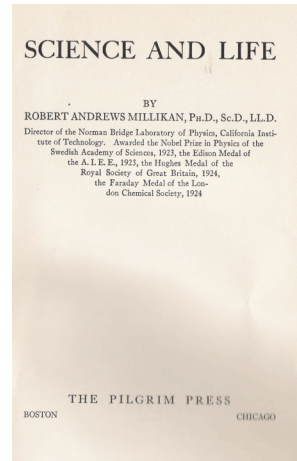
- “I have usually emphasized the lack of conflict between science and religion. But there is an absolute clash between certain types of religious thinking and the fundamentals of scientific thinking, for science cannot exist without throwing its whole emphasis upon the attitude of open-minded search for truth and the spread of knowledge regardless of all consequences.” (1927)

Millikan as religious modernist

- Millikan advocated “the formation of union churches which renounce entirely the validity of sectarian differences, and in so doing shake off largely the shackles of tradition and place religion upon a more idealistic basis than it has been on before,” while waiting for the denominations to catch up.



Four popular books spread his views between 1924 and 1932

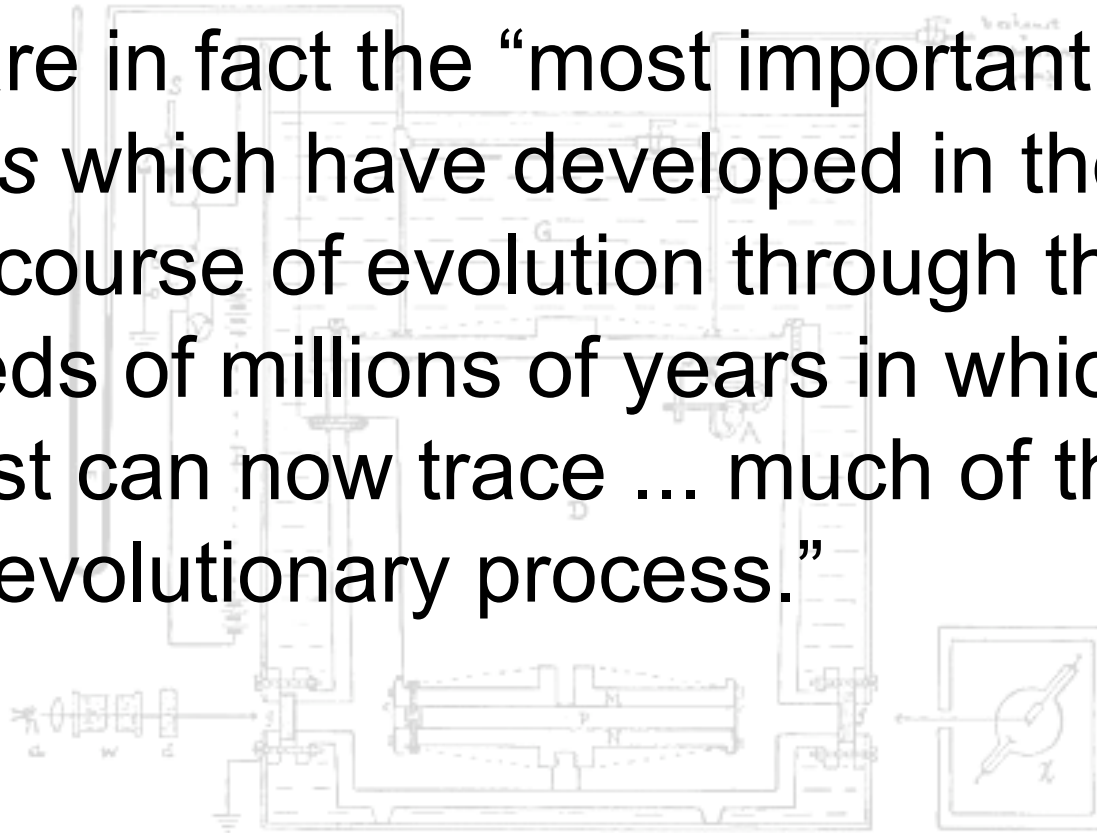


Millikan on “Values”

- “*The most important thing in the world is a belief in the **reality** of moral and spiritual values.*”
- Spiritual values “unquestionably stand for just as **fundamental realities** in the experience of all human beings as to words like matter, motion, speed, energy, weight, table, rock, etc., which are used in connection with the *material* qualities or attributes which belong to the world in which the physicist makes his measurements.”

Millikan on “Values”

- They are in fact the “most important *realities* which have developed in the whole course of evolution through the hundreds of millions of years in which the scientist can now trace ... much of the whole evolutionary process.”



Millikan on “God”

- “It seems to me as obvious as breathing that every man who is sufficiently in his senses to recognize his own inability to comprehend the problem of existence, to understand whence he himself came and whither he is going, must in the very admission of that ignorance and finiteness recognize the existence of a Something, a Power, a Being in whom and because of whom he himself ‘lives and moves and has his being.’ That Power, that Something, that Existence, we call God.”

Millikan on “God”

- “The God of Science” is “the spirit of rational order and of orderly development, *the integrating factor in the world of atoms and of ether and of ideas and of duties and of intelligence*. Materialism is surely not a sin of modern science.”
- Einstein was well known for holding a similar view, and Millikan liked to point this out.

Millikan on Divine Immanence

- “Certainly no human brain was present when fifty million years ago *it was decided* that puny little Eohippus ... was to evolve into a modern horse, or that a close relative of the chattering monkey should one day become an Abraham Lincoln...”
- The human spirit or soul was “the latest and the most important element in the evolutionary process of creation.”

Millikan on Divine Immanence



- James Jeans' theory of the breakdown of matter in the universe
- Millikan and others saw this as "the old hypothesis of the 'heat-death', and they did not like it."

Millikan on Divine Immanence

Millikan believed he had proved that cosmic rays formed when heavier nuclei were built up from protons and electrons, not when the reverse took place. This led him to call cosmic rays “*the birth-cries of the infant atoms of helium, oxygen, and silicon.*”



Millikan on Divine Immanence

- Atom building in space balanced the destruction of atoms in stars. Therefore, said Millikan, “we are able to regard the universe as in a steady state now, and we are able also to banish forever the nihilistic doctrine of its ultimate ‘heat-death’.”
- Atom building will “allow the creator to be continually on his job.”

Science and Religion in Harmony

- “The idea that nature is at bottom benevolent,” he said, “is a contribution of science to religion, and a powerful extension or modification of the idea that Jesus had seen so clearly and preached so persistently.”
- “the practical preaching of modern science—and it is the most insistent and effective preacher in the world today—is extraordinarily like the preaching of Jesus.”