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WHAT DOES EINSTEIN MEAN?1

By Professor J. FRENKEL
POLYTECHNIC INSTITUTE, LENINGRAD

I am not sure that I shall fully succeed in explain-
ing during this hour what relativity is, but I shall be
satisfied if I succeed in at least removing some of the
prejudices which have arisen in connection with this
question. Relativity is so simple that the greatest
difficulty in understanding it lies in getting rid of
one’s prejudices. It is really remarkable that Ein-
stein, who is certainly the most popular scientist in
the world, is the author of the most unpopular theory
in the world. I think a greater harmony should pre-
vail in the popular mind between the man and his
work.

One of the common prejudices concerning the
theory of relativity is the idea that according to it
everything is relative. Nothing could be more incor-
crect than this assumption. The theory of Einstein
states that many things, many notions, many qualities
which we thought absolute are actually relative, but
on the other hand it destroys the old absolutes only
to build up new ones. It could be called, with better
right perhaps, the theory of the absolute and not the
theory of relativity. It introduces relative quantities
only in order to build up absolute quantities out of
them and to build up rules for connecting them which
will be absolute and which will express physical laws.
Maybe if the theory of relativity were called the
theory of the absolute it would not appeal so much
to the present sophisticated generation, and there
would be less talk about it.

Another prejudice is the idea that the theory of
relativity was entirely created by Einstein. It was
prepared for by the work of Newton. The relativity
of space was incorporated in Newton’s work; Ein-
stein extended this so as to include the relativity of
time.

In his celebrated “Principia” Newton started by
saying that space is absolute and that space is at rest:
also, he added that time is absolute and flowing uni-
formly without any connection with other events. Let
us leave time alone for a while, and consider what

1 Address before the Minnesota Chapter of Sigma Xi.