

CURRENT SCIENCE—50 YEARS AGO



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Physics of the "Smell".

PROF. BOHR in his recent address¹ on 'Life and Light' has emphasised the peculiar organisation of living beings with a view to understanding their essential characteristics. This organisation exhibits typical atomistic and quantum traits combined with the ordinary mechanical characteristics, in a manner having no counterpart in inorganic matter.

As an illustration of the refinement to which this organisation is developed, Prof. Bohr has considered the case of the human eye. The eye is an ideal and perfect optical instrument inasmuch as its resolving power and its sensitiveness have reached the limit imposed by the wave and quantum nature of light. It has been found that the eye can be stimulated by a few light quanta (or possibly a single light quantum?). Further the optical resolving power $[(5/d^n)^n$ where d

¹ *Nature*, March 25 and April 1, 1933.

is the aperture of the eyelens in inches] and the physiological resolving power (angle subtended by the "cone" in the retina at the eyelens) of the eye are almost the same. This perfection of the eye naturally leads one to expect that the other organs also may reveal similar characteristics, the study of which will greatly help in establishing the relation between organic evolution and physics.

A consideration of the construction and function of the nose may also afford another interesting example. The human nose appears to be very sensitive to smell. However, physics corresponding to the sensation of smell does not exist at all, though physics of the eye and the ear (being simpler) has developed so much.

It is of interest to see whether the sensitiveness of the nose has also reached a limit imposed by the atomic character of substance giving rise to the sensation of smell; *i.e.*, whether the sensation of smell can be excited even when there be present a few molecules (or a single molecule?) of an intensely smelling substance. Any data that might be obtained in this connection are bound to be helpful in the study of the evolution of senses. It is intended to make some tests on this point and we shall be glad to receive information on data concerning this if already obtained.

D. V. GOGATE.
D. S. KOTHARI.

Physics Department,
University of Allahabad,
Allahabad.

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FELICITATIONS

On behalf of the Current Science Association we would like to convey our greetings to Prof. S. Ramaseshan, President of the Indian Academy of Sciences and Past-President of the Current Science Association, on his 60th birthday on October 10, 1983. We

wish him many more years of happy, prosperous and active scientific life.

The Indian Academy of Sciences will bring out special issues of *Proceedings (Chemical Sciences)* and *Bulletin of Materials Science* to mark the occasion.