

# SCIENCE

VOL. 90

FRIDAY, SEPTEMBER 15, 1939

No. 2333

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SCIENCE: A Weekly Journal devoted to the Advancement of Science, edited by J. MCKEEN CATTELL and published every Friday by

THE SCIENCE PRESS

New York City: Grand Central Terminal

Lancaster, Pa.

Garrison, N. Y.

Annual Subscription, \$6.00

Single Copies, 15 Cts.

SCIENCE is the official organ of the American Association for the Advancement of Science. Information regarding membership in the Association may be secured from the office of the permanent secretary in the Smithsonian Institution Building, Washington, D. C.

## THE SPECIES COMPLEX IN BIOLOGY AND EDUCATION<sup>1</sup>

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353-03060  
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THIS afternoon I propose to discuss a certain mental trait which looms conspicuously in the background whenever I reflect upon the history of biology or upon academic procedures as I have observed them these many years. It is the innate propensity of active minds to form species, *i.e.*, successively to make distinctions, to point out similarities and then to assemble the things that are alike into their kinds. It applies to everything from chemical elements to college fraternities. Since the Latin word "species" is synonymous with the English word "kind" even to the point of being adequately indefinite I shall employ it in a wide and general sense which, indeed, accords with its earlier usage.

This mental trait is not a simple one. It is made up

<sup>1</sup> Address at the Graduate Convocation of Brown University, June 17, 1939.

of a strong emotional factor, an inborn urge to put things in order and, alas, keep them there; of the intellectual faculty of discernment and discrimination which perceives distinctions and similarities; and of the constructive imagination which makes it possible to assemble in the mind things that are widely separated in space and time. For convenience I presume to call this trait the species-forming complex or, for short, the "species complex."

I shall first point to a few characteristic effects, good and bad, of the operation of the species complex in general; then to some of its accomplishments in the field of biology; and finally, shall venture to suggest that the recognition of the characteristics of this trait in human beings is desirable as we face the problems of the day inside and outside of the university.

The species complex often manifests itself in the

# Science

**90 (2333)**

*Science* **90** (2333), 10-260.

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