nothing. The use of such an assumption in most cases in the social sciences has usually turned out to be an attempt to explain the known in terms of the less known.

In conclusion, it seems to me that science *as science* may well beware of accepting as yet any universal principle of explanation. It can not accept such until it is demonstrated. The method of science is not, as some philosophers have proclaimed, to build itself up upon some universal assumption. Rather its methods are the pragmatic ones of observation, comparison, testing by experience and measurement. So far as science approaches exactness it is built up by the method of measurement; and many other things than mechanical cause and effect can be measured. It is decidedly premature as yet to say that science will approve any universal principle or method of explanation; and it is decidedly regrettable that any one who works in any of the sciences should, by a narrow definition of scientific method, rule out of the category of scientific works James's "Principles of Psychology" and the whole list of important contributions in the mental and social sciences not based upon the mechanistic assumption.

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January 20, 1913

"MORE LITTLE BEASTS"

TO THE EDITOR OF SCIENCE: Under the title of "More Little Beasts of Field and Wood," Mr. William Everett Cram, of Hampton Falls, New Hampshire, has given an account of various animals met by him in his walks through the woods, written in a pleasant fashion suggestive of Thoreau, though without Thoreau's touch of moral epigrams.

It is illustrated by a number of fairly correct wood-cuts.

A novel suggestion, at first sight not at all convincing, is this, that the group of hares and rabbits is not an off-shoot from the rodents, but from the family of cats, a rabbit in the long past being a cat, adapted perforce to a vegetable diet. A good many parallelisms between the cats and the rabbits are suggested, among others that cat flesh is sometimes substituted for that of rabbits in the inns of Europe.

DAVID STARR JORDAN

SCIENTIFIC BOOKS

The Horse and its Relatives. By R. LYDEKKER, F.R.S. New York and London, The Macmillan Company. Pp. vi + 286; Pls. XXIV., and 11 text figs. 1912. Price $2.60 net.

This extremely interesting volume is a companion to that on the ox and its kindred by the same author, and summarizes most admirably our knowledge of the members of the equine race, both living and extinct. In the opening chapter the place of the horse in nature is discussed, together with that of its few surviving relatives. The eight or nine species of horses, five of rhinoceroses and five or six of tapirs contrast strikingly with the great number of artiodactyles still living. The perissodactyles are therefore looked upon as a waning race, but the cause of their diminution in numbers is not yet determined.

In discussing the structure of the horse, especial emphasis is placed upon the high degree of specialization of feet and teeth. In the foot the variable degree of reduction of the splint bones is of interest, the great shire horse of England retaining the entire shaft together with remnants of the first and second phalanges of the lateral toes, all firmly welded together, while the Argentine horses show the greatest diminution of these bones. The longheadedness so characteristic of all horse-like forms is a very ancient character and gives space before the eyes for the development of the wonderful dental battery. The pit-like depression in front of the orbit sometimes seen in modern horses is supposed to have lodged a scent gland, of recognition value, similar to that of the deer. The leg callosities known as "chestnuts" are also decadent skin glands. The long columnar teeth with their complex infolding of enamel are admirably adapted to the harsh siliceous grasses which constitute the principal article of diet. They are much more perfect than in the cud-chewing ruminants, in which the food