

MENTAL EVOLUTION

IN

ANIMALS.

WILL.

INTELLECT.

PRODUCTS OF
INTELLECTUAL DEVELOPMENTTHE PSYCHOLOGICAL
SCALE.PSYCOGENESIS
OF MAN.

50				50
49				49
48				48
47				47
46				46
45				45
44				44
43				43
42				42
41				41
40				40
39				39
38				38
37				37
36				36
35				35
34				34
33				33
32				32
31				31
30				30
29				29
28	Indefinite morality.		Anthropoid Apes and Dog.	15 months.
27	Use of tools.		Monkeys, Cat, and Elephant.	12 months.
26	Understanding of mechanisms.		Carnivora, Rodents, and Ruminants	10 months.
25	Recognition of Pictures, Understanding of words, Dreaming.		Birds.	8 months.
24	Communication of ideas.		Hymenoptera.	5 months.
23	Recognition of persons.		Reptiles and Cephalopods.	4 months.
22	Reason.		Higher Crustacea.	4 weeks.
21	Association by similarity.		Fish and Batrachia.	12 weeks.
20	Recognition of offspring, Secondary instincts.		Insects and Spiders.	10 weeks.
19	Association by contiguity.		Mollusca.	7 weeks.
18	Primary instincts.		Larvae of Insects, Annelida.	3 weeks.
17	Memory.		Echinodermata.	1 week.
16	Pleasures and pains.			Birth.
15			Celenterata.	
14	Nervous adjustments.			
13				
12				
11	Partly nervous adjustments.		Unknown animals.	
10			probably Celenterata,	
9			perhaps extinct.	Embryo.
8				
7	Non-nervous adjustments.		Unicellular organisms.	
6				
5				
4				
3	Protoplasmic movements.		Protoplasmic organisms.	Ovum and
2				
1				Spermatozoa

REFLEX. ACTION. AND VOLITION.

GENERALIZATION.
REFLECTION & SELF CONSCIOUS THOUGHT.
IMAGINATION.
NOI
ABSTRACTION.
PERCEPTION.

SENSATION.

NEUR-
ILITY.DISCRIM-
INATION.
CONDUC-
TILITY.

CITABILITY.

11 C. 7. A

MENTAL EVOLUTION IN ANIMALS.

BY

GEORGE JOHN ROMANES, M.A., LL.D., F.R.S.,

ZOOLOGICAL SECRETARY OF THE LINNEAN SOCIETY. -

WITH A

POSTHUMOUS ESSAY ON INSTINCT.

BY

CHARLES DARWIN, M.A., LL.D., F.R.S.



LONDON:

KEGAN PAUL, TRENCH, & CO., 1, PATERNOSTER SQUARE.

1885. A

HARRISON AND SONS,
PRINTERS IN ORDINARY TO HER MAJESTY,
ST. MARTIN'S LANE.

(The rights of translation and of reproduction are reserved.)