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## SECOND ESSAY.

On the Essence of Reasoning and of its Chief Varieties.

The ~~two~~ Parts two of the Pop. Sci. papers are to appear as Parts I & II of the "FIRST ESSAY" and this one, which supersedes the 6<sup>th</sup> Pop. Sci. paper, is to follow as the Second Essay.]

Some seventy years ago, my beloved and accomplished school-ma'am taught me that human kind, being formed in the image of our Maker, were endowed with the power of Reasoning, while "the animals," ~~but~~ lacking that power (which might have made them dissatisfied,) received, each kind, certain "instincts" to do what was generally necessary for their lives. At least, so I understood her. But when I subsequently came to observe the <sup>behaviours</sup> conduct of several big

dogs and little birds, and two parrots, I gradually came to think quite otherwise. For, in the first place, I gradually amassed a body of experiences which convinced me that many animals, perhaps all the higher ones do reason, if by Reasoning be meant <sup>mental</sup> any operation which from the putting together of two believed facts leads to a Belief different in substance from either of those two. Once, for example, while I was driving <sup>freely</sup> along a country road <sup>to me,</sup> with which I was very familiar, a setter-dog that I had never seen before raced ~~passed~~ past me at the top of his speed. In an instant a turn~~ed~~ of the road hid him from my sight. "Poor fellow!" I thought, he races after his master in fear of losing him forever." A moment

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later, reaching the turn myself, I saw the dog again, not far ahead of me, but at a point where the road branched, and now <sup>sitting</sup> seated on his haunches. He was not printing nor showing the least sign of fatigue, but evidently puzzled which branch of the road. After a second or two, he started off <sup>at the same tremendous pace as before</sup> on the more travelled of the two roads, though being the older and harder, it was not very obviously the more travelled of ~~the~~ the

two. These alternations, - a halt between two utmost speedings, with <sup>neglect</sup> no symptoms of fatigue, - seemed to me to ~~show~~ show plainly that the dog had stopped to consider which of the two branches of the road his master had probably taken; and his sudden choice of the more travelled

showed that he concluded that his master would probably do as most people, which was a kind of argument <sup>technically</sup> "probable deduction," - the commonest reasoning called a raijn, when information <sup>lacking</sup> is defective or conflicting.

My father's front door, where Hall in Harvard University now faces the street, used to open into a large square hall, along the opposite side of which the stairs case ran up, and <sup>behind that</sup> back of which the stair-

case went up to the third storey where, another stair brother's, had a college student, had a worked and kept the finest spitz dog I ever saw. In the entrance-hall near the front door, <sup>was</sup> stood a parrot's perch with a grey parrot on it. When that brother used to come home

11.5] Lectures, he would call "Spitz, spitz, spitz," and the dog would run down the two flights to take a walk with his master. But on several occasions when I was in the hall, some ~~other~~ neighbour entered at about the time of my brother's return; whereupon the parrot would call out "Spitz, spitz, spitz," and the dog would run down into the hall, only to meet the jeering laughter of the parrot.

Now to anybody who knows parrots this ~~is~~ performance will seem exceedingly commonplace; and it is all the better an ~~etc~~ instance for being so. It cannot be said the my school-ma'am's "instinct" prompted the parrot's action, for far from tending to ~~the~~ <sup>the</sup> ~~provision~~ <sup>provision</sup> of its life, anybody who narrowly watched the dog would

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possibly came as near to honoring  
man's ability to uplift and improve his

be inclined to think it might ~~be~~ <sup>as any</sup> ~~practical~~ <sup>practical</sup> ~~indulgence~~ <sup>indulgence</sup> in practical jokes ever so

had such an effect. came to such a dénouement.