

A REPLY TO PROFESSOR GUTHRIE

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I find that I agree to a surprising extent with Guthrie's strictures on my theory of learning.¹ But I still do have a few difficulties.

First, for a couple of general ones:

(1) I think it is rather unfair for Guthrie to appropriate the term 'associative learning' and to identify it with his own particular brand of 'conditioning' and 'stimulus-response-ism.' I, also, like the term 'associative learning.' In fact, I should like to use it to cover the first five of my seven varieties of learning.²

(2) I do not see how his conditioned-response-ism will ever explain 'latent learning.' For latent learning provides a set-up in which the learning takes place even when the correct responses are not made appreciably oftener by the animal during the learning period itself than the incorrect responses. But I suspect that perhaps Guthrie does not really believe our supposed experimental 'facts' concerning latent learning.

But to come now, secondly, to the matter of the string-pulling situation itself.

(3) My feeling from watching the animals (this, of course, is pretty awful anthropomorphism) is that the first time they pull the string in, it is because they have already learned—*i.e.*, that they have then and there just 'got,' at least tentatively, the required 'expectation' and that it is because they have got it that they then pull the string in—not that they pull the string in and then get the expectation.³

¹ E. R. Guthrie, Tolman on associative learning, *PSYCHOL. REV.*, 1937, 44, 525-528.

² E. C. Tolman, The acquisition of string-pulling by rats—conditioned response or sign-Gestalt?, *PSYCHOL. REV.*, 1937, 44, 203f.

³ Let me emphasize again and again that an 'expectation' does not require words nor consciousness—that it is just a 'set' for a certain environmental object-sequence.

(4) Guthrie is quite right in setting me straight that the 'conditioned-response' doctrine does not require only one preceding unconditioned stimulus and only one preceding unconditioned response for the conditioning to develop out of. I am grateful for the correction.

(5) The fact which Guthrie has emphasized here, as elsewhere, to wit, that a lot of stupid things get learned is, of course, extremely important. And, if most learning were of that sort, certainly the simple conditioning description would seem the more apt. As it is, however, there seems to be a great range from types of learning that look like pure 'dumb' conditioning at one end of the scale to ones which look like 'nice' and 'wise' expectations at the other.

And my feeling is that, if we must have but 'one principle' (and both Guthrie and I seem to be introverted enough to want one), it is going to be much easier to make 'dumb' conditioning a subordinate variety of expectation than to make expectation a subordinate variety of 'dumb' conditioning.

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