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On Being Fair though One-sided

If we piece together the different characteristics commonly ascribed to a creative scientist by the general public, and by some scientists, too, we produce the portrait of a person apparently suffering from a split personality. On the one hand, we are told that the creative scientist is distinguished by his objectivity. He is unfeeling, unmoved in his work, busy only with passive observation of phenomena. On the other hand, we are told that the creative scientist is a creature of great passion, a passion for proving his own favorite theories, or a passion for insuring, when the outcome of an experiment bears on public policy, that the outcome supports the policy he considers proper.

These opposing characteristics arise in part out of efforts at mutual correction. Each view is something of an exaggeration offered in an effort to correct the misconceptions promulgated by the opposing view. But a resolution of these apparently conflicting accounts does not consist in saying that a more accurate picture must lie somewhere between the two extremes. The extremes are there. Assuming that the scientific attitude, at least as an ideal, is not one of disharmony, a more accurate picture may be found by showing how scientists can fulfill both descriptions without contradiction.

How this may be done was nicely expressed some years ago by the philosopher and psychologist William James. In his essay "The Will To Believe," first published just before the turn of the century, James sees objectivity in science not as something impersonal and passive, but, like partisanship in behalf of a pet hypothesis, as a kind of passion, the passion not to be deceived. The scientific attitude as an ideal then emerges as the possession of two passions, as zeal in obedience to two commands, the command to gain the truth and the command to shun error.

The two commands, as James goes on to point out, are, in general, independent. Rarely is one confronted with the demand: if you do not believe this, then you must believe that. To deny that there is a pot of gold at the end of the rainbow does not commit you to the hypothesis that the pot contains silver. Occasionally, to be sure, belief in one hypothesis rules out the acceptance of another hypothesis. If you believe that the pot contains only gold, you cannot believe it contains silver. The two rules, then, are independent, and which you choose will determine the flavor of your intellectual life. You may, James continues, devote yourself to guessing the truth, paying little attention to avoiding errors. Or you may be so dedicated to avoiding error that you are prepared to let truth fend for itself.

Any attempt to sum up the scientific attitude in a few tidy phrases may justly be regarded with suspicion. After all, science is diverse both in its subject matter and in its approaches to that subject matter. But some summations are better than others, and the characterization of science as embracing simultaneously both rules strikes close to the mark. In the matter of making discoveries, unconcern is not a promising trait. But the desire to gain the truth must be balanced by an equally strong desire not to be played false.—J.T.