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Deconstructing the multi-dimensional Aha! experience

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Abstract: The Aha! experience is not a unitary construct, and several different dimensions have been proposed as its constituents. However, a systematic analysis of how much each purported dimension predicts the overall Aha! experience is needed. Presented with a large set of difficult problems (magic tricks), participants were asked to rate their solving experience with regard to suddenness in the emergence of the solution, certainty about the solution, surprise, pleasantness, relief, and drive. The strongest correlations with an overall Aha! rating on correct solutions were found for the dimensions of pleasantness, relief and certainty. Suddenness and drive were correlated to a lesser extent. No significant correlation was found for surprise. These results question the wisdom of the established approach of using a multi-component operational definition for the Aha! experience that encompasses suddenness, certainty and surprise. The positive affect that comes with discovery seems better expressed as pleasantness or relief than surprise.