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The effect of overt language use on category induction

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Abstract: Successfully solving a problem should help people solve similar problems, but such generalization is often surprisingly limited. We investigated generalization performance when people explicitly verbalized solutions to open-ended category-induction "Bongard problems", compared to tacitly indicating that they had found a solution. In a Bongard problem people are presented with an array of items falling into two classes, and have to induce the basis for the classification by working out what (sometimes quite abstract) feature of the items is relevant, from a vast set of possibilities. We measured objective performance by testing people with new items, and observed how explicitly vs. tacitly expressed solutions affected generalization across concretely similar or abstractly similar problems. For the concretely similar problems, explicitness boosted transfer of correct solutions. For the abstractly similar problems, there was no evidence of transfer, though there was a general positive effect of explictness.