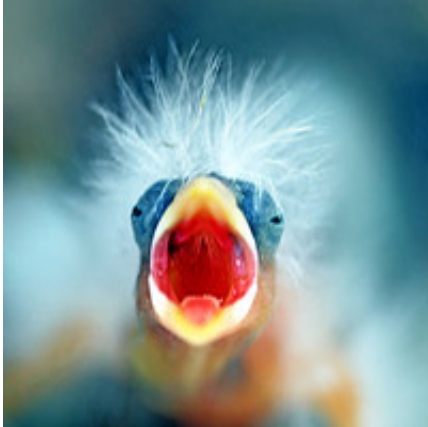


Mother knows best -- even before birth

March 11 2010



Mother birds communicate with their developing chicks before they even hatch by leaving them messages in the egg, new research by a team from the Department of Zoology, University of Cambridge, has found.

By changing conditions within the egg, canary mothers leave a message for their developing [chicks](#) about the life they will face after birth. In response, nestlings adjust the development of their begging behaviour.

If chicks get a message that they will be reared by generous parents then they beg more vigorously for food after hatching. But chicks that are destined to be raised by meaner parents end up being much less demanding.

By attending to messages in the egg, nestlings gain weight more rapidly because they match their demands to the parents' supply of food, and can avoid either begging too little or wasting effort on unrewarded begging.

The Cambridge team made the discovery using fostering experiments, exchanging [eggs](#) between canaries' nests so that the chicks grew up in an environment that they were not expecting.

"This work changes our understanding of the pre-natal environment in birds," says Dr Rebecca Kilner of the University of Cambridge, who led the research.

"We've known for about twenty years that maternal substances in the egg can influence how chicks develop, but the common assumption is that they are a means by which [mothers](#) manipulate their [offspring](#) in a way that suits the mother more than the chick.

"What we've shown is the reverse: these substances are actually there to suit the chick. If we muck up the message in the egg experimentally, it is the chick that is penalised directly rather than the mother."

More information: Camilla A. Hinde, Rufus A. Johnstone, and Rebecca M. Kilner, 'Parent-offspring conflict and coadaptation' is published in *Science* on 12 March 2010.

Provided by University of Cambridge

Citation: Mother knows best -- even before birth (2010, March 11) retrieved 25 April 2024 from <https://phys.org/news/2010-03-mother-birth.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private

study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.