

# Daughters inherit inventorship from parents – unless they have a younger brother

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Having a parent that's an inventor increases the likelihood of a first-born daughter becoming an inventor, unless they have a second-born brother, finds research from University of Mannheim, Business School (<https://www.bwl.uni-mannheim.de/en/>) (UMBS).

Karin Hoisl, holder of the Chair of Organisation and Innovation at the UMBS, alongside colleagues Hans Christian Kongsted from Copenhagen Business School and Myriam Mariani from Bocconi University, investigated the role of parental inventorship on inventorship in children. They used data for Danish children (almost 1.2million) born between 1966 and 1985, acknowledging whether one, both, or neither of their parents were inventors. Inventors were identified through patent applications.

They found that having parents who were inventors increased the probability of first-born daughters becoming inventors, but only if they did not have a second-born brother. The presence of a younger brother limits an older sister's benefits from parental knowledge and skills on inventorship, discussion of career plans, access to parental networks, or transmission of enthusiasm for creativity and innovativeness.

First-born sons also inherit inventorship from parents but are not negatively impacted by the presence of a subsequent sibling. The transmission of inventorship to a first-born daughter is also unaffected if they have a second-born sister.

The researchers suggest that parents interpret external information based on their beliefs and form gendered expectations on daughters' and sons' chances of success from being an inventor. These expectations lead parents to allocate their time and resources to their children differently based on gender.

Prof. Hoisl says,

"We show that behaviours that create gendered careers or professional activities start in early childhood. Thus, pushing women into STEM graduate degrees can help, but it might not be enough to eliminate the gender gap in inventorship."

To decrease the gender gap in inventorship, we should act during childhood and target children and parents. Making people aware of stereotypical thinking and gendered behaviours that can limit children's opportunities is an important first step.

These findings were first published in the journal Management Science.

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