MAPPING LANGUAGE TO REAL-WORLD EVENT PROBABILITIES ACROSS MIDDLE CHILDHOOD

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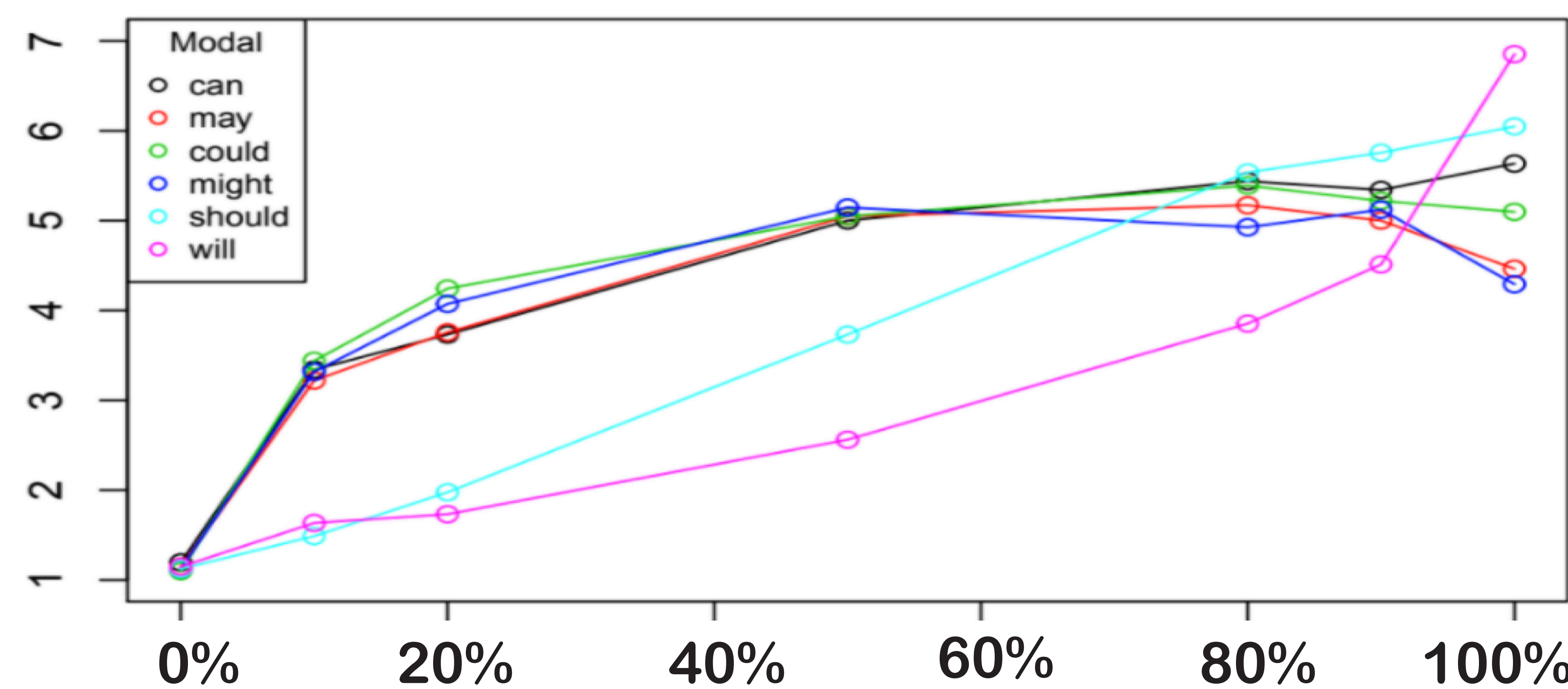University of Chicago | University of Washington | University of California, Berkeley

We use modal expressions ("*you might get COVID if…*") to communicate probabilities

Older preschoolers understand that modal verbs can be ordered on a continuum…

•••• *could* ••••••• *should* ••••••• *will* ••••

…but how do children understand how that scale relates to event probabilities?

Adults' judgments of modal use are sensitive to event probabilities in production and comprehension
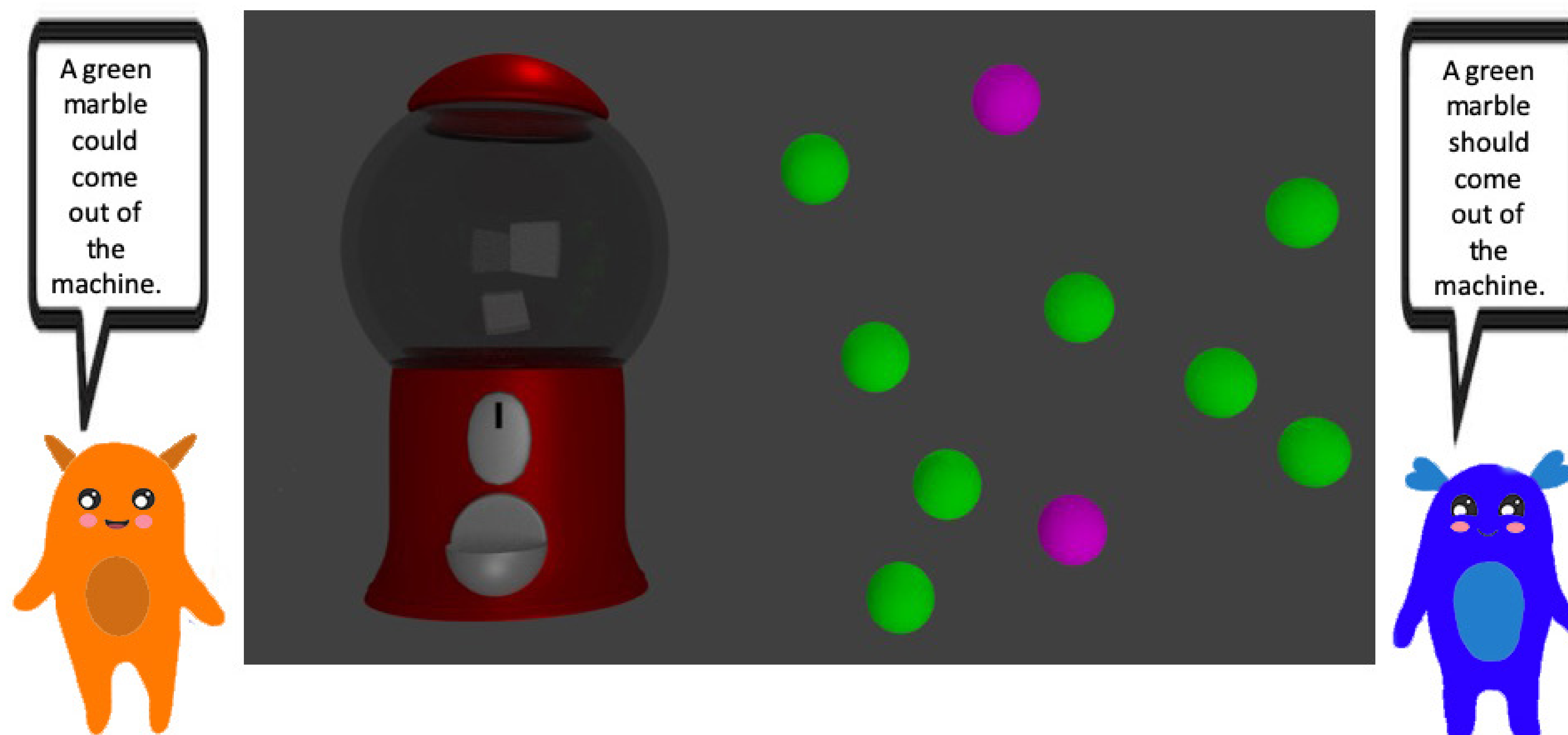
METHOD
Child-friendly "Who said it better?" task

EXPERIMENT 1

44 children (4--6 years; *M*=5.5 years, *SD*=.78) | 21 adults (*M*=20 years)

3 outcome probabilities:
20% | 80% | 100%

4 modal contrasts:
*can-could | could-should | could-will | should-will*

32 randomized trials

> A green marble could come out of the machine.

> A green marble should come out of the machine.

EXPERIMENT 2

48 children (6--10.5 years; *M*=8.1 years, *SD*=1.3) | 20 adults (*M*=21 years)
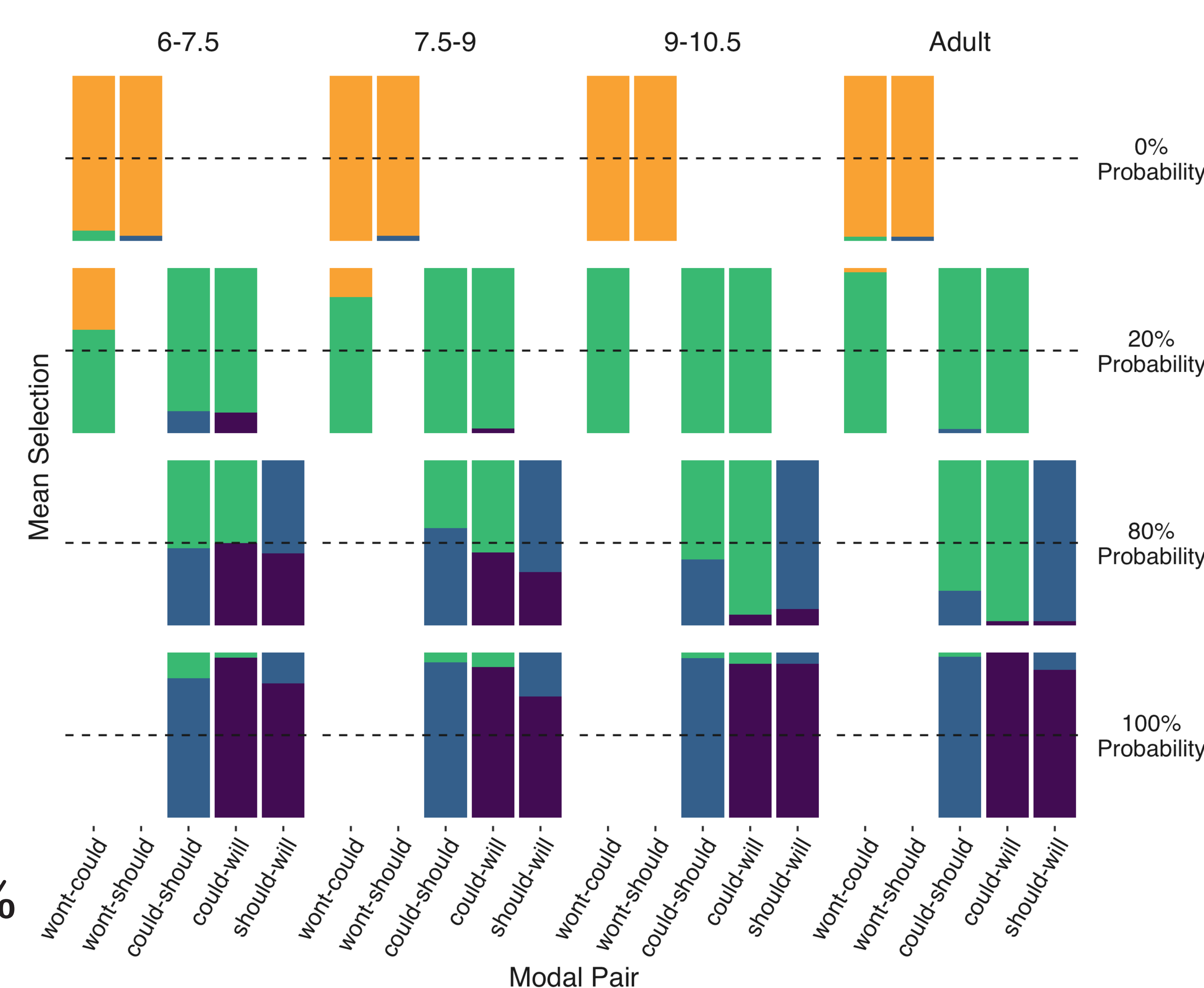
4 outcome probabilities:
0% | 20% | 80% | 100%

5 modal contrasts:
won't-could | won't-should | could-should | could-will | should-will

22 randomized trials

20% Probability   80% Probability   100% Probability
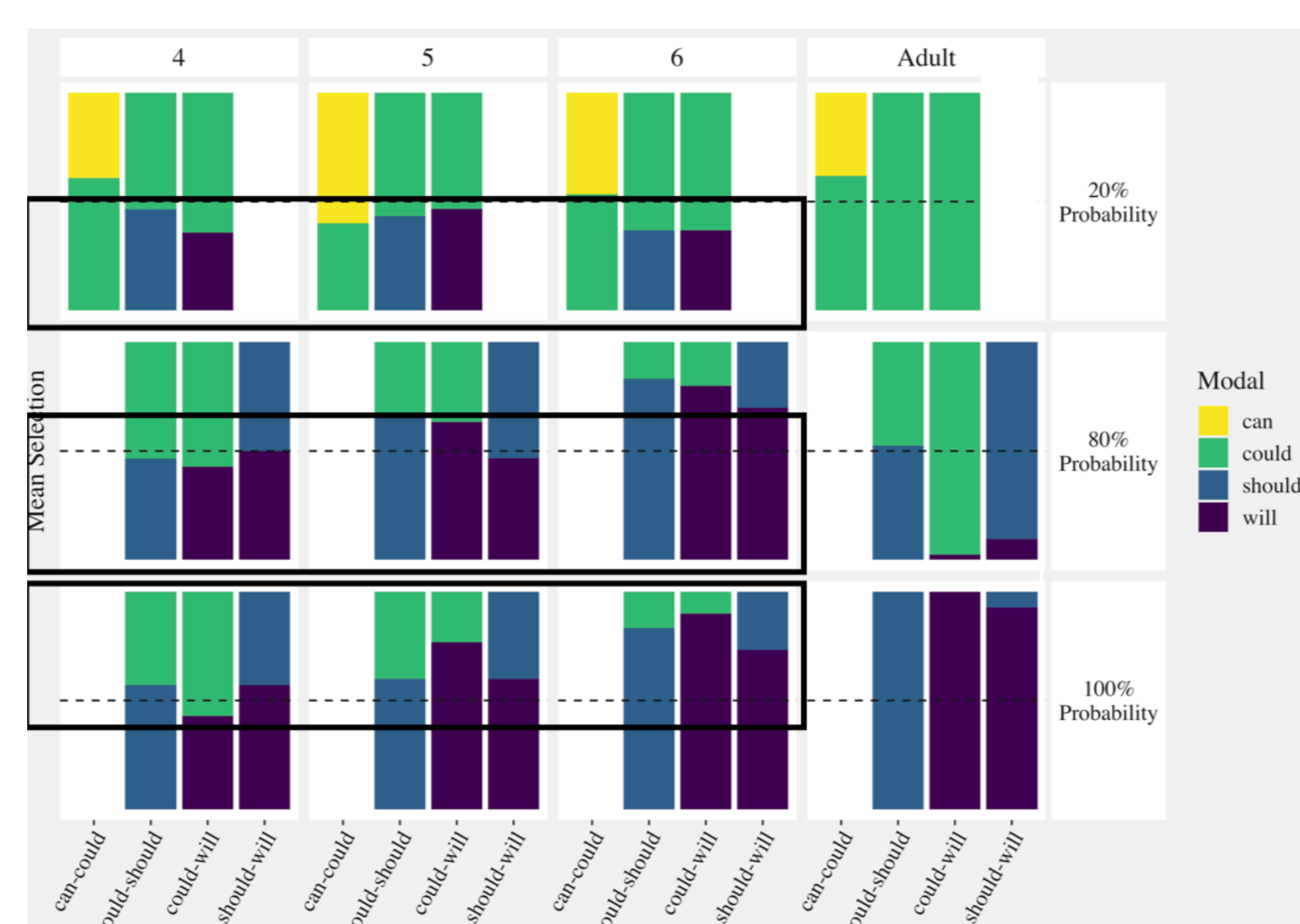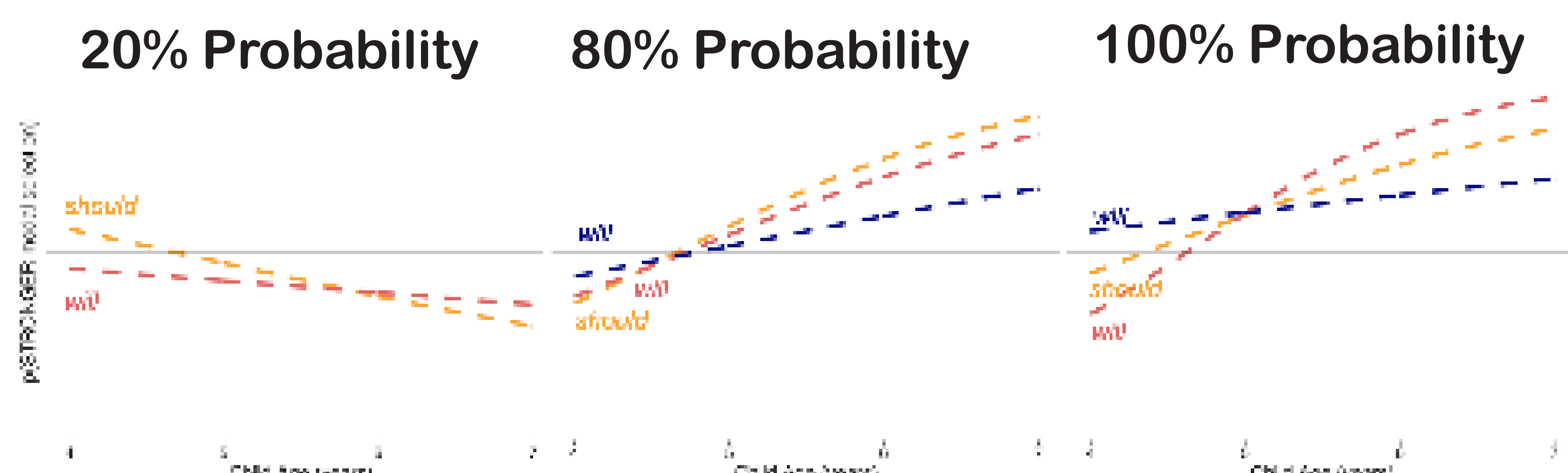
With age, greater selection of stronger modal for higher-probability outcomes (*Age x Outcome Probability OR* = 1.02 [1.01, 1.03])

…including using *will* for 80% (but not *won't* for 20%?!)

Adults reserve *will/won't* for deterministic outcomes (0%, 100%) and avoid using can/could/should for probabilistic outcomes (20%, 80%)

Despite understanding modals' relative strength, 5-6-year-olds do not…*what information is available to children (e.g., via caregiver language) to learn this distinction?*

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REFERENCES: Hirst & Weil, 1982; Leahy & Zalnieriunas, 2021; Noveck, Ho, & Sera, 1996; Ozturk & Papafragou, 2015