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Featured Research

*Centre for Lifespan Development Research*

# Dr. Angela Evans

## *How does deception develop in children and youth?*

**Dr. Evans ...**
is a Developmental Psychologist and Assistant Professor at Brock University, where she is the principal investigator of the Social–Cognitive Development Lab in the Psychology Department. Dr. Evans completed her Master's degree at Wilfrid Laurier University, her Ph.D. at the University of Toronto and her Postdoctoral Fellowship at the University of Southern California.

### What's the bottom line?

The next time you see a child telling a lie, don't worry — Dr. Evans' research suggests that lie–telling is a normal part of development and is an indicator of children obtaining new cognitive skills. Dr. Evans and her colleagues use interesting methods to test how and why children and youth lie in varying situations. This research allows for a unique window into children's minds and sheds light on a topic that is commonplace in today's society, yet is often not thought of in terms of development.

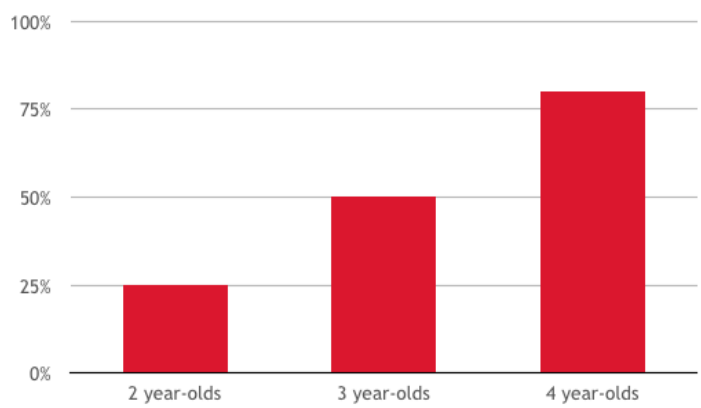
### The emergence of lying — What is this research about?

Dr. Evans and colleagues have discovered that children may begin to lie as young as two years of age and that within a two–year timespan the majority of children will lie to conceal a transgression. Specifically, Dr. Evans found that roughly *25% of two–year–olds, 50% of three–year–olds and 80% of four–year–olds told spontaneous lies (see Figure 1)* when asked about a transgression they had committed (e.g., peeking at a toy they were told not to peek at). The consistent increases in lie–telling among children demonstrate that it is an expected part of normal development.

Dr. Evans has also investigated the emergence of various types of lies, such as *antisocial lies* (lies told to conceal rule breaking/ transgressions), *prosocial lies* (white–lies told to be polite) and even *blue–lies* (lies told to benefit a group). Findings indicate that even young children produce these various types of deceptive behaviours.

Dr. Evans' research suggests that lying may be tied to certain developmental milestones, such as age and cognitive functions. Specifically, Dr. Evans' research has furthered the understanding of how children strategize when crafting their lies. Children must first judge whether or not they are likely to be caught lying prior to determining whether to lie and second need to ensure that their answers to follow–up questions from the questioner do not reveal their lie — these abilities improve with age and specific mental processes which are highlighted in later sections (e.g., Theory of Mind and Executive Functioning).

**Figure 1: Percentage of spontaneous lies by age group**



From Dr. Evans' work it is clear that there is a developmental pattern around lying, with specific changes occurring throughout childhood and adolescence, such as children being more likely to tell a lie and being able to produce more sophisticated lies with age. However, the question remains, what are some of the main influences on this developmental trend ...

### *Your child might be lying, but it is a good thing!*

Lying may often be thought of as unwanted behaviour, but Dr. Evans' research has shown that lie–telling is a normal behaviour and should be expected to appear and increase between the ages of 2 and 4. Additionally, lie–telling behaviours are a sign of specific cognitive developments, such as *Theory of Mind* and *Executive Functioning*, which begin to develop in children by the age of 3.

*Theory of Mind* is the ability to attribute thoughts/beliefs/desires to oneself and others and also understand that others may have differing thoughts/beliefs/desires. With lying, children need to develop Theory of Mind in order to understand that they can affect others' mental states through deception (e.g., make someone believe something false by lying to them). To lie effectively, children need Theory of Mind to help them evaluate whether or not they should lie in the first place (e.g., did this person see me peek at the toy) and then to help them understand that they must maintain consistency with their follow–up statements and not accidentally reveal their lie (e.g., initially lying about peeking at a toy, but then revealing the colour later on). The ability to maintain consistency has been called 'Semantic Leakage Control'. Overall, Dr. Evans' research has contributed to the understanding of how Theory of Mind relates to the development of strategic lie–telling among children, finding that four – and five–year–olds possess a greater ability to strategize around their lies than three–year–olds, who tend not to be skilled at maintaining their lies.

*Executive Functioning* refers to specific mental processes that 'coordinate' many cognitive operations. Dr. Evans has found that Executive Functions may be central to deception, particularly through working–memory (e.g., holding the truth in memory while developing an alternative statement) and inhibitory control (e.g., the ability to suppress telling the truth while reporting a lie). With the development of these skills, young children gain the ability to strategically lie.

Overall, lying may not be initially perceived as a positive behaviour, but it is indicative of key developmental milestones being reached by children.

### *Nature or Nurture?*

Beyond the specific cognitive developments associated with lying, Dr. Evans has proposed a deeper motivation for why young children lie. Specifically this behaviour may be motivated by an adaptive inclination towards 'self–preservation' and 'self–enhancement' – where children may lie to manipulate the world and avoid getting in trouble by individuals they perceive as being more powerful (e.g., adults).

### *It's all in the way you say it*

It can often be difficult for adults to determine if a child is lying, which is important in specific settings where the truth is necessary (e.g., court cases). In order to further the understanding of the linguistic aspect of lies, Dr. Evans and colleagues have investigated the different ways children tell lies, through examining transcriptions of their spoken lies and truths, and have made some interesting discoveries. For example, when children are telling lies, as compared to the truth, they may be more likely to use words that describe their senses (e.g., seeing and touching).

Additionally, when children are asked to repeat truths and lies, specific differences may emerge – for example when children repeatedly tell the same truth they may become more confident with repetition through

using larger words and less tentative terms, which is consistent with other research.

Dr. Evans also has investigated the differences between the ways children verbalize truths and lies when they speak of stressful situations. Contrary to findings about non–stressful events, children who are lying about stressful situations tend to use more self–references in their statements, as opposed to truthful statements about stressful situations, which tend to have more tentative terms. This finding is important for the legal system as child and youth witnesses are often asked to recount stressful events.

Overall, it appears that there may be unique tendencies within children's spoken truths and lies and these may differ depending on the emotional content of the event being discussed.

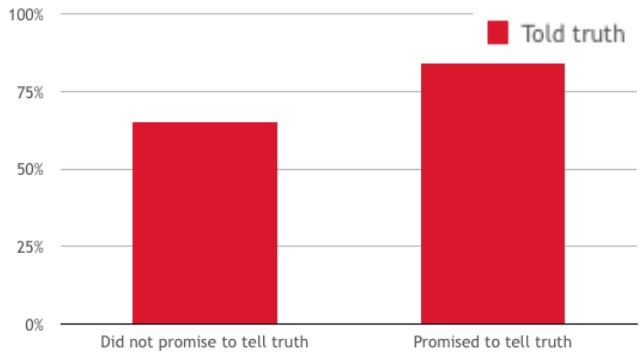
### *I lie, so you must lie too*

Previous research has discovered that adults tend to display 'judgement biases' when determining the honesty of others. These biases are based upon ones' perception of their own trustworthiness, with dishonest individuals being more likely to perceive that others are also dishonest and honest individuals being more likely to perceive that others are also honest. Dr. Evans and colleagues have investigated whether or not this tendency exists among school–aged children, finding that by 8 years of age children can display this bias within their perceptions of their peers' honesty.

## So what – Where is this research being used?

***Legal System*** – Do you promise to tell the truth, the whole truth and nothing but the truth? This statement may appear minor, but research has demonstrated that the act of promising to tell the truth may be an 'honesty–promoting technique', more so than moral competency exams, which involve children being tested on their conceptual understanding of truth and lies and are often required in order for children and youth to testify. Dr. Evans has been able to replicate this finding with adolescents (see Figure 2), indicating that the honesty promoting effect of promising may exist for both children and youth. Dr. Evans' research, along with others in the field, demonstrates that jurisdictions may want to consider removing the moral competency exam from their requirements (as Canada did in 2006 with Bill C–2, based upon the work of other researchers), as it may prevent capable children and youth from testifying.

**Figure 2: Percentage of 8– to 16–year–olds who told a lie before and after**




Dr. Evans has also investigated the 'honesty benefits' of repetition, as child and youth witnesses are often exposed to repeated interviewing before court. Her findings revealed differences in repetitions of lies and truths, but that these became harder to detect over repetitions – indicating that initial interviews may lead to the most accurate statements.

***Autism Spectrum Disorder (ASD)*** – It is often thought that children with ASD do not lie. However Dr. Evans has contributed to the understanding of this disorder through demonstrating that ASD children can lie on their own accord, but have issues with maintaining these lies when asked follow–up questions. Additionally, pro–social and anti–social lies may be related within ASD children, but not within typically developing, indicating that the underlying motivation to lie may be different for ASD children. These findings are important for understanding the social issues that youth with ASD may face, as certain aspects of deception (e.g., prosocial lies) are sometimes required for the development of friendships. If individuals with ASD have issues with these socially acceptable lies, they may face further issues securing peer groups.

***Cultural Differences*** — Dr. Evans has looked at differences in lying between collectivist (e.g., cultures that place value on the group above the self) and individualist (e.g., cultures that place value on the self above the group) societies. In her work she has established that children in collectivist cultures may have a tendency to tell blue—lies (for the good of the group) and this may be predicted from their evaluations of such morally justified lies. This may be related to group focused socialization within this culture. Future research will hopefully shed light on the development of blue—lies in western cultures, where peer—group values may be influential.

## How do they do it?

Dr. Evans employs interesting methods:

- Modified *Temptation Resistance Paradigm* where children are engaged in a "game" in which they are asked not to peek at a toy while the experimenter completes another task. These situations are designed to be highly tempting, thus motivating the children to peek and allowing for the experimenters to determine if the children will spontaneously lie later on
- Recounts of false accounts of stressful situations (e.g., bullying), which further replicate real—life situations
- Classic measurements of Theory of Mind and EF

## What's next?

Dr. Evans is continuing to investigate deception and moral and social—cognitive development — furthering the previously described studies and investigating new topics. Specifically, Dr. Evans is interested in exploring methods for promoting honesty among children and examining how to best question child witnesses to get the most honest and accurate reports (e.g., questions to ask and questions that children struggle with or have difficulty answering). Within this work Dr. Evans will be focusing on the cognitive components of these areas, looking specifically at executive functioning. These topics are certain to reveal interesting discoveries around children's lie—telling behaviours.

## Referred Works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## Want More Information?

Are you a student, researcher or parent who would like to be involved in Dr. Evans' work?


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