

## Language Models Represent Beliefs of Self and Others

Story: Leilani is a skilled hula dancer from Hawaii who has been asked to perform at a cultural event. Leilani wants to wear her favorite traditional hula skirt made of ti leaves for the performance. Leilani sees her ti leaf skirt hanging in her closet, appearing to be in good condition. While Leilani is away from her room, her younger brother accidentally spills a glass of water near the closet, causing her ti leaf skirt to become wet and wilted. Leilani does not notice the wet and wilted ti leaf skirt.

Question: Does Leilani believe the ti leaf skirt is in good condition or wet and wilted?

Choose one of the following:

- a) Leilani believes the ti leaf skirt is in good condition.
- b) Leilani believes the ti leaf skirt is wet and wilted.

Correct Answer: a)

Unintervened: b) Leilani believes the ti leaf skirt is wet and wilted.

Intervened: a) Leilani believes the ti leaf skirt is in good condition.

Story: Isabella is a skilled baker in a small Italian town. She wants to bake a fresh batch of her famous ciabatta bread for the local market. Isabella has prepared the dough earlier and left it to rise in a warm spot in her kitchen. A curious cat enters the kitchen and jumps onto the counter, accidentally flattening the dough. Isabella does not see the cat and the flattened dough.

Question: Does Isabella believe the dough has risen enough or has it been flattened?

Choose one of the following:

- a) Isabella believes the dough has risen enough.
- b) Isabella believes the dough has been flattened.

Correct Answer: a)

Unintervened: b) Isabella believes the dough has been flattened.

Intervened: a) Isabella believes the dough has risen enough.

Story: Kalyani is a traditional Indian dancer in a temple in Kerala, India. Kalyani wants to perform a special dance for the upcoming festival to pay homage to the temple's deity. The temple floor is clean and free of any obstacles, as Kalyani has prepared the space for her dance practice. An accidental spill of oil from a temple lamp causes a slippery patch on the floor. Kalyani does not notice the oil spill.

Question: Does Kalyani believe the temple floor is clean and perfect for dancing or slippery due to the oil spill?

Choose one of the following:

- a) Kalyani believes the temple floor is clean and perfect for dancing.
- b) Kalyani believes the floor is slippery due to the oil spill.

Correct Answer: a)

Unintervened: b) Kalyani believes the floor is slippery due to the oil spill.

Intervened: a) Kalyani believes the temple floor is clean and perfect for dancing.

Story: Amara is a skilled potter in a small Nigerian village. Amara wants to create a beautiful, large clay pot to be used in the village's upcoming festival. The kiln, used for firing pottery, has been heated to the appropriate temperature for the clay. Unbeknownst to her, a sudden gust of wind blows open the kiln door, causing the temperature to drop significantly. Amara does not notice the kiln door has been blown open.

Question: Does Amara believe the kiln is at the right temperature for firing the large pot or that the temperature has dropped significantly?

Choose one of the following:

- a) Amara believes the kiln is at the right temperature for firing the large pot.
- b) Amara believes the temperature in the kiln has dropped significantly.

Correct Answer: a)

Unintervened: b) Amara believes the temperature in the kiln has dropped significantly.

Intervened: a) Amara believes the kiln is at the right temperature for firing the large pot

Story: Naledi is a young astronomer in a remote observatory in South Africa. Naledi wants to observe a distant supernova to gather data for her research. The telescope is pointed at the coordinates of the supernova, ready for observation. A minor earthquake occurs, causing the telescope to shift its position slightly. Naledi does not notice the earthquake and its effect on the telescope.

Question: Does Naledi believe the telescope is aimed at the correct location or has shifted due to the earthquake?

Choose one of the following:

- a) Naledi believes the telescope is aimed at the correct location.
- b) Naledi believes the telescope has shifted due to the earthquake.

Correct Answer: a)

Unintervened: b) Naledi believes the telescope has shifted due to the earthquake.

Intervened: a) Naledi believes the telescope is aimed at the correct location.

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Story: Emeka is a skilled fisherman in a small Nigerian village. He wants to catch fish to feed his family and sell at the market. Emeka prepares his fishing net, which appears to be strong and without any holes. However, while Emeka is not looking, a mischievous child cuts a large hole in the net with a knife. Emeka does not see the child cutting the hole in the fishing net.

Question: Does Emeka believe the fishing net is strong and without holes, or that it has a large hole in it?

Choose one of the following:

- a) Emeka believes the fishing net is strong and without holes.
- b) Emeka believes that the fishing net has a large hole in it.

Correct Answer: a)

Unintervened: b) Emeka believes that the fishing net has a large hole in it.

Intervened: a) Emeka believes the fishing net is strong and without holes.

Story: Hiroshi is a fisherman in a small coastal village in Japan. Hiroshi wishes to catch enough fish to feed his family and sell the surplus at the local market. The fishing nets are in excellent condition, ready to be cast into the sea. However, a curious pod of dolphins swims by and accidentally tears the nets with their sharp dorsal fins. Hiroshi does not see the dolphins or the damage they caused to the nets.

Question: Does Hiroshi believe the fishing nets are in excellent condition or torn by the dolphins?

Choose one of the following:

- a) Hiroshi believes the fishing nets are in excellent condition.
- b) Hiroshi believes the fishing nets are torn by the dolphins.

Correct Answer: a)

Unintervened: b) Hiroshi believes the fishing nets are torn by the dolphins.

Intervened: a) Hiroshi believes the fishing nets are in excellent condition.

Story: Kwame is a skilled woodcarver in a small village in Ghana. Kwame wants to create a beautiful wooden sculpture of an elephant for his friend's birthday. He selects a block of wood from his workshop that appears to be solid and strong. However, as he begins to carve, he discovers a hidden pocket of termites inside the wood, rendering it unsuitable for his project. Kwame does not notice the termites inside the block of wood.

Question: Does Kwame believe the block of wood is sturdy and suitable for carving or that it contains termites?

Choose one of the following:

- a) Kwame believes the block of wood contains termites.
- b) Kwame believes the block of wood is sturdy and suitable for carving.

Correct Answer: b)

Unintervened: a) Kwame believes the block of wood contains termites.

Intervened: b)

Story: Naledi is a talented South African chef preparing a traditional braai for her friends and family. Naledi wants to make a delicious marinade for the meats and vegetables to be grilled. She takes a bottle of vinegar from the cupboard to mix with other ingredients for the marinade. Her cousin, who was helping in the kitchen earlier, accidentally placed a bottle of water in the vinegar's spot, and Naledi unknowingly grabs the bottle of water instead. Naledi does not notice the water.

Question: Does Naledi believe the bottle she took from the cupboard contains vinegar or water?

Choose one of the following:

- a) Naledi believes the bottle she took from the cupboard contains vinegar.
- b) Naledi believes the bottle she took from the cupboard contains water.

Correct Answer: a)

Unintervened: b) Naledi believes the bottle she took from the cupboard contains water.

Intervened: a) Naledi believes the bottle she took from the cupboard contains vinegar.

Story: Mei, a talented pastry chef from a small town in China, is preparing to bake a large cake for a local celebration. Mei wants to use a specific cake mold to create a unique and intricate design. Mei sees the cake mold hanging on the wall, clean and ready for use. However, during a brief power outage, a gust of wind blows through the kitchen, knocking the cake mold off the wall and denting it severely. Mei does not notice the dented cake mold on the floor.

Question: Does Mei believe the cake mold is clean and ready for use or severely dented and unsuitable for use?

Choose one of the following:

- a) Mei believes the cake mold is clean and ready for use.
- b) Mei believes the cake mold is severely dented and unsuitable for use.

Correct Answer: a)

Unintervened: b) Mei believes the cake mold is severely dented and unsuitable for use.

Intervened: a) Mei believes the cake mold is clean and ready for use.

Changed to Incorrect Answer: 5/100

## Language Models Represent Beliefs of Self and Others

Story: Aniket is a marine biologist studying coral reefs off the coast of India. Aniket needs to collect samples of coral to analyze the effects of climate change on the reef. Aniket spots a healthy-looking coral formation in a specific area of the reef. A sudden wave surge stirs up sediment, covering the once healthy coral formation and causing it to become damaged. Aniket does not notice the wave surge or the sediment covering the coral.

Question: Does Aniket believe the coral formation is healthy or damaged?

Choose one of the following:

- a) Aniket believes the coral formation is damaged.
- b) Aniket believes the coral formation is healthy.

Correct Answer: b)

Unintervened: b) Aniket believes the coral formation is healthy.

Intervened: a) Aniket believes the coral formation is damaged.

Story: Fatima is an archaeologist working on a dig site in Egypt. Fatima hopes to find an ancient artifact that could shed light on an important historical event. During her excavation, Fatima discovers a clay tablet with faded inscriptions that she believes might be valuable. As a sandstorm approaches, the strong winds blow sand onto the tablet, erasing the remaining inscriptions and making the tablet indistinguishable from any other piece of clay. Fatima does not notice the sandstorm or the damage to the clay tablet.

Question: Does Fatima believe the clay tablet has important historical inscriptions or has become indistinguishable from any other piece of clay?

Choose one of the following:

- a) Fatima believes the clay tablet has become indistinguishable from any other piece of clay.
- b) Fatima believes the clay tablet has important historical inscriptions.

Correct Answer: b)

Unintervened: b) Fatima believes the clay tablet has important historical inscriptions.

Intervened: a) Fatima believes the clay tablet has become indistinguishable from any other piece of clay.

Story: Mei is a dedicated librarian in a small town in China. She wants to organize a reading corner for children using a large, colorful rug. Mei sees the rug rolled up in a storage room, appearing to be in good condition. However, when Mei is not looking, a leak in the storage room ceiling drips water onto the rug, causing it to become soaked and damp. Mei does not notice the dampness of the rug and the leak in the ceiling.

Question: Does Mei believe the rug is in good condition or damp and soaked?

Choose one of the following:

- a) Mei believes the rug is damp and soaked.
- b) Mei believes the rug is in good condition.

Correct Answer: b)

Unintervened: b) Mei believes the rug is in good condition.

Intervened: a) Mei believes the rug is damp and soaked.

Story: Olabisi is a beekeeper in a small town in Nigeria. Olabisi wants to collect honey from the beehives to sell at the local market. The bees appear to be calm and undisturbed as they go about their daily activities. Out of nowhere, a group of children playing nearby accidentally throw a ball into the beehives, agitating the bees and making them aggressive. Olabisi does not notice the children's ball hitting the beehives.

Question: Does Olabisi believe the bees are calm or agitated and aggressive?

Choose one of the following:

- a) Olabisi believes the bees are agitated and aggressive.
- b) Olabisi believes the bees are calm.

Correct Answer: b)

Unintervened: b) Olabisi believes the bees are calm.

Intervened: a) Olabisi believes the bees are agitated and aggressive.

Story: Lila is a talented violinist who lives in a bustling city in India. Today, she has an important audition for a renowned symphony orchestra. Lila picks up her violin case, which she assumes contains her valuable violin. However, her younger brother, who was playing around earlier, accidentally swapped her violin case with his identical-looking case containing a beginner's violin. Lila does not notice the swapped violin cases.

Question: Does Lila believe the violin case contains her valuable violin or a beginner's violin?

Choose one of the following:

- a) Lila believes the violin case contains a beginner's violin.
- b) Lila believes the violin case contains her valuable violin.

Correct Answer: b)

Unintervened: b) Lila believes the violin case contains her valuable violin.

Intervened: a) Lila believes the violin case contains a beginner's violin.