

## Appendix 1 - Decision making training

The focus aspects of the training stories are described below:

- The fairness stories talking about a) the difference between fairness/equity and equality (e.g. Espinoza, 2007) and b) the social norms (Bicchieri & Chavez, 2010);
- The altruism stories elicit a) the prosocial (Larsen, Lee, & Ganea, 2017) and b) the charity behaviours, considering altruism in terms of personal cost (Eisenberg & Shell, 1986);
- The delay of gratification stories are about the role of prospective thinking enabling the individual to anticipate future outcomes in response to current outcomes (Lombardi et al., 2017), as in the case of a) personal reward or b) common social good.

### The structure of each training trial

- 1) *Initial phase*: at the beginning of every meeting, the experimenter handed over to all children a packet of sheets containing the first story followed by the questions created for each of them (at the end of the first story the researcher withdraws the sheets previously handed over to each child, while second story sheets are handed over);
- 2) *Story phase*: the researcher read the first story of the session aloud supported by the projection the story text and images in order to facilitate the content understanding;
- 3) *Multiple choice questions*: after the story reading, children were asked to answer the questions individually in order to stimulate children's reflections on the characters' perspective (Bianco, Lombardi et al., 2019). Each question had three answers: one option was completely correct, one was wrong but

challenging because it is close to the correct answer and the third one was completely wrong. Being at school allowed us, using the individual response method, to create a situation similar to the children school habits; in addition, in that way the experimenter was certain that each child focused her or his attention on the highlights of the story.

- 4) *Feedbacks*: once the questions have been answered, the researcher provided comments, explanations of incorrectness answers and feedbacks on whether the children's choices are correct or not (for the importance of feedbacks during a training see Melot & Angear, 2003): for each question, the conversation started on the basis of the answers content and reflections that have led the children to make a certain choice from the options provided. All children were involved, by rising up their hands to share the given answer.
- 5) *Discussion*: starting from the stimuli emerged and based on the story's target, the discussion was conducted by the experimenter who welcomed children interventions who voluntarily decided to speak by providing them positive feedback and expanding children's comments referring to the session topic. The researcher ensured to take part in the conversation all the children discussing their point of views on the story and providing corrective feedback when needed. During the discussion, the experimenter had three aims: she guided children to correctly interpret mental states at the basis of the decisions made by the characters, she stimulated children to apply their perspective-taking ability to understand classmates' point of view about the story, and guided participants to reflect on the topic of the meeting (fairness, altruism or delay a gratification). For each training trial, the class discussion was concluded when all participants showed a good understanding of the story's topic.
- 6) *Children's examples and final discussion*: at the end of the discussion, after the experimenter summarised contents emerged, children were asked to think or imagine an example about the story's topic, starting from their own personal experience (Durlak et al., 2011), to anchor child experience to the emerged

learning in the discussion. All children are invited to participate, but, usually, one child volunteer start and then the researcher encourages others' participation.

## Examples of training trials

Story	Type of story	Questions	Category of Answers
<p><i>The line at the amusement park</i></p> <p>Every year, at the end of the school year, Federico, Davide, Giada and Sara's class organizes a school trip to an amusement park. Children are very close friends and spend a lot of time together at school and in their spare time. During the school trip, the amusement park is very crowded and the queues to get on each attraction are very long. The children are in line with many other people to get on the Panoramic wheel and spend the waiting time looking at the park map and chatting. Federico and Giada are looking for Sara and Davide among the many people who have left. "Where am I?" They ask. "Here they are. I knew it!", says Giada a little angry," Davide and Sara are trying to skip the line! ". "They never liked to wait!" Says Federico. "But I don't like to wait either!" Giada replies. The Panoramic wheel's owner calling for the next ride. Sara and Davide climb on the Panoramic wheel. "Sara and Davide skipped the line. That's not fair! We could have all skipped it!", Federico and Giada reply. In fact, the two children have to wait for the next ride to be able to climb on the Panoramic wheel. Federico and Giada are very sad and angry about the behavior of the two friends and think that what they have done is not fair. So, after the ride on the Panoramic wheel, they go t buy the candyfloss. They are in line, but they realize that it's getting late: it's almost time to go home and probably won't have time to take the candyfloss. In front of them,</p>	Fairness	Is the amusement a crowded place?	<p><i>Correct</i></p> <p>Yes, in all the attractions there is a queue.</p> <p><i>Wrongs</i></p> <ul style="list-style-type: none"> <li>- No, there are few people.</li> <li>- Yes, there is a queue in all the attractions except for the Panoramic Wheel.</li> </ul> <p><i>Feedback:</i></p> <p>Right! All the attractions are quite crowded.</p>
		What do Federico and Giada think about Sara and Davide behavior?	<p><i>Correct</i></p> <p>Federico and Giada think that Sara and Davide didn't behave in the right way.</p> <p><i>Wrongs</i></p> <ul style="list-style-type: none"> <li>- Federico and Giada think that Sara and Davide are clever compared to them.</li> <li>- Federico and Giada think that Sara and Davide are nice.</li> </ul> <p><i>Feedback:</i></p> <p>That's right! Federico and Giada think that Sara and Davide's behaviour was not correct because they skipped the line while the others wait their turn in line.</p>

<p>in line, they see Sara and Davide calling them. “Come on, guys, get close to us! If you don't, you will have to give up candyfloss! ”. Federico and Giada think about it and finally answer: "No, sorry, it's not fair to skip the line!". Then Davide and Sara reply: “Okay! Then we will join you and go home all together”.</p>		<p>Why do Sara and Davide decide not to buy candyfloss?</p>	<p><i>Correct</i></p> <p>Because they understood that what they had done before was not fair</p> <p><i>Wrongs</i></p> <ul style="list-style-type: none"> <li>- Because they got tired to stay in line.</li> <li>- Because they thought candyflow wasn't good.</li> </ul> <p><i>Feedback:</i></p> <p>Well done, right! Sara and Davide realized that skipping the line was not a fair behavior, thanks to Federico and Giada that told them.</p>
		<p>What do you think the meaning of these phrases in history is? "They never liked to wait!" “But I don't like to wait either!"</p>	<p><i>Correct</i></p> <p>Federico and Giada decided that although nobody likes to stand in line, they wouldn't skip the line because it's not fair</p> <p><i>Wrongs</i></p> <ul style="list-style-type: none"> <li>- Federico and Giada knew that Sara and Davide didn't like to wait.</li> <li>- Even Federico e Giada wanted to skip the line</li> </ul> <p><i>Feedback:</i></p> <p>Right! In fact Federico and Giada think that even though they don't like to stay in line, it's not fair to skip it and so they decided not to tbuy candyfloss.</p>

<p><i>Francesco learns to share</i></p> <p>Francesco's favourite word was "Mine!" He liked to keep his things close to him without ever sharing them with others. Sometimes, Francis wanted to be alone and one day he stayed to listen to his classmates and thought they were having a great time. "Yesterday with my mom, I cooked a lot of cookies. I can't eat all the cookies by myself", Ludovico said to Nicolò. " Why don't we all go back to my home after school time for a snack?", Nicolo replied. "Okay," said Alice, "I'll bring some jam!", "I'll bring some bread for jam!", Silvia said. Francesco also would to go, but he didn't want to share with their classmates the chocolate that he usually eat for a snack after the school time. His classmates didn't see him and didn't invite him to snack with them after school. Francesco walked home. He was very happy because as soon as he arrived home he could eat all the chocolate that his mother had bought him. Thinking about what had happened at school, however, he began to feel more sad than happy. Francesco told his mother about the snack at Nicolò's house: "We could bake some muffins with chocolate," suggested his mother. "You could take them to Nicolò's house and share them with your friends: it might be a nice surprise for them!". Francesco was not so sure he wanted to share his chocolate, but he loved baking sweets with his mother. So he saved in a bowl some chocolate to eat later and used the rest of chocolate to bake the muffins. Francesco couldn't decide what to do. In the end, he</p>	<b>Altruism</b>	<p>What did Francesco do when he was home with his mother?</p>	<p><i>Correct</i></p> <p>He baked the muffins with some of the chocolate he had</p> <p><i>Wrongs</i></p> <ul style="list-style-type: none"> <li>- He baked the muffins with all the chocolate he had</li> <li>- He did his homework</li> </ul> <p><i>Feedback:</i></p> <p>Right! He saved some chocolate in a bowl and used the rest to bake the muffins.</p>
		<p>What was Francesco's worries in front of Nicolò's door?</p>	<p><i>Correct</i></p> <p>Francesco didn't think he'd eat the muffins.</p> <p><i>Wrongs</i></p> <ul style="list-style-type: none"> <li>- Francesco didn't think he'd have fun</li> <li>- Francesco had no worries</li> </ul> <p><i>Feedback:</i></p> <p>That's right! Francesco didn't want to share the muffins because he thought his friends would eat all the muffins and he wouldn't have any. In fact, he was very worried.</p>

<p>went to Nicolò's house to surprise his classmates. Once he arrived at the front door, Francesco could hear his friends inside, and they were talking. "Surely it will be fun to join them," you know. But then a worrying idea came to his mind: "If everyone eats my muffins," he thought, "there won't be enough left for me!" Soon after, Nicolò opened the door. "Francesco!", he exclaimed, "Come in and join us! How kind of you to have brought the muffins!" he said. Nicolò took the muffins, even though Francesco kept thinking that he would have preferred to eat them all by himself. When the classmates saw him, everyone came to greet him. Very soon Francis started having so much fun that he completely forgot about his muffins. It was a beautiful afternoon. Once back home, Francesco did nothing but tell his mother how much he was happy with his friends and how good the snacks that the others had brought were. The next day, at school, Francesco borrowed his suitcase with the new ruler and new glue to Ludovico, who was building some models of their favourite cars. When Ludovico comes back the suitcase still in excellent condition and without having ruined anything, he gave Francesco one of the models he had built.</p>		<p>How did Francesco feel when he shared muffins with his classmates?</p>	<p><i>Correct</i></p> <p>Francesco felt happy because he hadn't thought about muffins while playing.</p> <p><i>Wrongs</i></p> <ul style="list-style-type: none"> <li>- Francesco felt sad because he could not eat all the muffin</li> <li>- Francesco felt angry because he didn't want to share the muffins</li> </ul> <p><i>Feedback:</i></p> <p>Well done, right! Francesco felt happy because he had fun with his friends. The next day he decided to share his suitcase with Ludovico.</p>
		<p>What do you think the meaning of this sentence: " Francesco borrowed his suitcase with the new ruler and new glue to Ludovico"</p>	<p><i>Correct</i></p> <p>Francesco decided to share his suitcase with Ludovico.</p> <p><i>Wrongs</i></p> <ul style="list-style-type: none"> <li>- Francesco wanted to have one of the models that Ludovico was building.</li> <li>- Francesco thought he was borrowing his suitcase with Ludovico.</li> </ul> <p><i>Feedback:</i></p> <p>Right! Right! Francesco made a decision to share his things with his friend Ludovico.</p>

<p><i>The holiday</i></p> <p>It's evening, mom Claudia and daddy Fabio, Marco's parents, are on the couch. They are very tired: "We are working a lot in this period, we need rest!" says mom. "It would be nice to have a holiday for a few days." Daddy answers: "You're right, I'd like it too and I think it is a good idea! But it's the end of October, Marco has to go to school and we have no money for another holiday after the summer's Cruise". The next morning, during breakfast, mom Claudia and daddy Fabio resume their speech: "I thought, Claudia, that we could organize ourselves to go to the mountains a couple of days next weekend" says daddy. "That would be wonderful...", replied Mom. "...Or we could decide to wait until the Christmas holidays and organize a skiing holiday", daddy continued. Mom looked at him, hesitated a little bit and said: "That would be even more beautiful! Come on, let's wait for Christmas! So we can enjoy a whole week together with Marco free from all</p>	<p><b>Delay of Gratification</b></p>	<p>What does mom Claudia say to daddy Fabio on the couch?</p>	<p><i>Correct</i></p> <p>It would be nice to take an holiday because we're working a lot and we're tired...</p> <p><i>Wrongs</i></p> <ul style="list-style-type: none"> <li>- It would be nice to take an holiday because I saw an offer</li> <li>- It would be nice to go to the mountains fro skiing</li> </ul> <p><i>Feedback</i></p> <p>Right! In fact, mom Claudia tells daddy Fabio that they're really tired and that it would be nice to have holiday to rest.</p>
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<p>our schedules of school and job. I'll make a reservation!" On December 26th, mom Claudia, daddy Fabio and Marco left for the skiing holiday. "It's really worth waiting all this time!", said Mom Claudia as soon as they arrived at their destination.</p>		<p>Daddy Fabio agrees with mom Claudia to take a holiday?</p>	<p><i>Correct</i></p> <p>Yes, but he reminds her that they don't have enough money and that Marco has to go to school.</p> <p><i>Wrongs</i></p> <ul style="list-style-type: none"> <li>- Yes, but he thinks that Claudia's overreacting.</li> <li>- No, he doesn't agree with her.</li> </ul> <p><i>Feedback:</i></p> <p>Well done! In fact, daddy Fabio agrees with mom Claudia. But he thinks to wait a little bit because now they don't have a lot of money and Marco has to go to school.</p>
		<p>Why did mom Claudia hesitate when daddy Fabio proposed the skiing holiday?</p>	<p><i>Correct</i></p> <p>Because she was deciding whether to go to the mountains a couple of days in October or take a skiing holiday at Christmas.</p> <p><i>Wrongs</i></p> <ul style="list-style-type: none"> <li>- Because he didn't understand the question.</li> <li>- Because he thought Daddy Fabio didn't want to make the journey</li> </ul> <p><i>Feedback:</i></p> <p>Exactly! In fact, mom Claudia was deciding to give up the weekend in the mountains the following weekend for a skiing holiday at Christmas.</p>

What do you think the meaning of this sentence: "It's really worth waiting all this time!",

*Correct*

It was really worth deciding to wait all this time

*Wrongs*

- It was really worth trying to wait all this time
- It was really worth the thought of waiting all this time

*Feedback:*

- Right! In fact, mom Claudia decided to wait for a longer and more carefree holiday.

## References

- Bicchieri, C., & Chavez, A. K. (2010). Behaving as Expected: Public Information and Fairness Norms. *Journal of Behavioural Decision Making*, 23, 161-178.  
<https://doi.org/10.1002/bdm.648>
- Eisenberg, N., & Shell, R. (1986). Prosocial Moral Judgment and Behaviour in Children: The Mediating Role of Cost. *Personality and Social Psychology Bulletin*, 12(4), 426–433. <https://doi.org/10.1177/0146167286124005>
- Espinoza, O. (2007). Solving the Equity-Equality Conceptual Dilemma: A New Model for Analysis of the Educational Process. *Educational Research*, 49, 343–363.  
<https://doi.org/10.1080/00131880701717198>
- Larsen, N., Lee, K., & Ganea, P. (2017). Do storybooks with anthropomorphized animal characters promote prosocial behaviours in young children? *Developmental Science*, 21, e12590. <https://doi.org/10.1111/desc.12590>
- Lombardi, E., Di Dio, C., Castelli, I., Massaro, D., & Marchetti, A. (2017). Prospective thinking and decision making in primary school age children. *Heliyon*, 3(6), e00323.  
<https://doi.org/10.1016/j.heliyon.2017.e00323>