Dankesrede von Prof. Michael Tomasello

anlässlich der Klaus J. Jacobs Preisverleihung vom 2. Dezember 2011 an der Universität Zürich

Thank you Professors Petersen and Silbereisen for your kind words. I would like to express my deepest gratitude to the Jacobs Foundation for sponsoring this award to support basic research in child development, and to the jury for singling out my research. Needless to say, in the modern world one never does good science on one's own, and so I am happy to accept this award on behalf of my entire research team. We will use the funds to work toward the goal of a better understanding of how young children develop in different social and cultural contexts.

My interest in child development began with Jean Piaget (from that other city in Switzerland to the West over there). So let me begin with two quotes from Piaget:

(1) There can be no … moral autonomy except by cooperation.

(2) Only co-operation constitutes a process that can produce reason.

So cooperation is central both in human morality and in human reason. That is a pretty heavy load. But let me see if I can flesh out these two statements a bit with some research and theory on cooperation that we have been doing in our child laboratory in Leipzig.

In terms of morality, Piaget was quite clear: you do not get it from parents or other adults. His insight, following from Durkheim, was that obeying authority was one thing, but being concerned with others and learning to treat others with reciprocity and respect depended on interactions with peers, who were not authorities but equals. Morality is how we work out things with others by means *other* than power and authority.

Here are two relevant studies from our lab. In the first one, 3-year-old children are presented with a step-like apparatus, enclosed in Plexiglas. There is a single stick that stretches across the bottom step with a reward on each end. To get the rewards each child must grab one end of the stick and then they must lift it up together, step-by-step to the top, where there are holes. The trick is that one child gets her reward prematurely, by accident as it were, and our question was whether that lucky child would feel committed enough to the unlucky partner to continue collaborating until the end, even though there was nothing more in it for her. The answer is that they did. And moreover, they helped their partner much more often if they were in the midst of collaborating than if the partner just asked for help with her side of the apparatus outside of a collaborative context. **Young children help others more when they are collaborating with them than otherwise.** Interestingly, in this same

experimental setup, our nearest primate relatives, chimpanzees, did not help their partner very often and not more during collaboration than outside of collaboration.

In a second study pairs of 3-year-olds are presented with an out–of–reach board to pull in, and each child is given one end of a single rope. The trick is that the rope is just threaded through some hooks on the board, so if one child pulls alone it simply comes out; to pull in the board they have to pull together. Children believed they were pulling in 4 toys together, but when they pulled 3 toys rolled over to one lucky child whereas only 1 toy rolled over to the other. In this situation, the lucky child immediately shared a toy with the unlucky child almost every time, equalizing their rewards. In contrast, if each child pulled a different rope independently and one child ended up with 3 toys and the other child with 1 toy, they shared much less often. And if they simply came into the room and there were 3 toys on one child's side of the board and 1 toy on the other child's side, they almost never shared. **Young children share more with others when they are collaborating with them than otherwise**. And again, chimpanzees in a very similar set up did not behave differently (they shared very infrequently) whether they were collaborating or not.

The theoretical notion that best describes situations like these is *interdependence*. When people are interdependent, they are like a family. In situations of interdependence, when we all need each other, it is natural for us to help one another in our tasks and to share with one another equally to make sure we are all taken care of and achieve our common goals.

Cooperation is thus closely related to human morality; but it is much less obviously related to human reason. The problem is that reasoning seems like an individual process: we can do it in the privacy of our room. It is not like pulling in a rope together with someone else. But solitary reasoning is the end product of an extended developmental process involving cooperation and communication with others. Most especially, reasoning requires the ability to see things from multiple perspectives: this object in front of me is simultaneously a dog, an animal, a pet, and a pest. Although other primates may engage with objects differently on different occasions, they do not conceptualize the same object from multiple perspectives simultaneously. The ability to do this enables humans not only to reason, but more generally to conceptualize an objective world independent of any single perspective.

The point is this. The ability to coordinate multiple perspectives depends on the prior ability to share attention with others, which derives from cooperation. If you look out of one window of the building and I look out another, we do not have different perspectives, we just see different things. But if we both look at these glasses together in joint attention, we also know that you are doing that from your perspective and I am doing it from my perspective: we have different perspectives on "the same

thing". The ability to jointly attend to things with others originates in collaborative activities in which young children and a partner aim together at a joint goal and so jointly attend to the same things – but at the same time each has her own individual role in the collaboration and her own individual perspective on the objects of joint attention. Scaled up to a higher level, when children discuss and reason with others, they make most progress if they have a common goal – arriving at a joint decision or solution, for example – toward which they attempt to coordinate their differing perspectives. Importantly, this process is most beneficial for children if they have these discussions with peers who haven't the power or authority to legislate a solution (the way that well-meaning adults often do) but instead must engage in a true negotiation of perspectives. Children internalize such discussions with equal peers, and thereby come to reason for themselves.

Piaget was Rousseau-ian; he believed that young children develop best without too much intervention from adults. This obviously does not mean adults should ignore children. What it means is that the optimal situation for development is one in which adults structure the physical and social environments of children so as to optimize their learning experiences, and then let them have those experiences on their own. I would argue that from our research and that of others, making sure that young children have plenty of opportunities to interact collaboratively with peers in spontaneous, independent interactions - with adult authority in the background - facilitates their development in fundamental ways with respect to the deepest and most important aspects of both human morality and human reason.