



MEASURING EMPATHY: COLLABORATIVE ASSESSMENT PROJECT (MECAP)

WHY DOES EMPATHY MATTER TO OUR INSTITUTIONS?

Empathy is a social and emotional skill that many psychologists say is foundational to who we are as human beings. Empathy helps us understand and value others' experiences or struggles and it can motivate us to act or respond to these situations. The ability to empathize with others has been identified as a core skill for what is termed "pro-social behavior"-the actions that are involved in building close relationships and developing strong communities (Thompson, 2003).



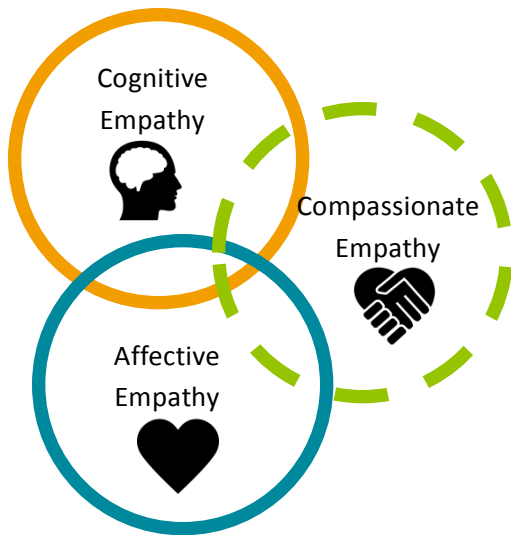
Concurrently there's a growing awareness that attitudes and emotions are key variables in people's decisions to take positive action for animals and nature. A number of studies have found that empathy can mediate people's motivation to promote animal welfare and to take pro-environmental action (Pfattheicher, 2015; Tam, 2013; Schultz, 2000). The collaboration between Point Defiance Zoo and Aquarium, the Seattle Aquarium and Woodland Park Zoo to both incorporate best practices and assess our success at fostering empathy for animals will contribute to the overall mission supported by the AZA that *all people respect, value and conserve wildlife and wild places*.



WHAT IS EMPATHY?

The body of literature contains countless inconsistencies in the definition of the term as well as discrepancies in its use. Within both psychology and mainstream culture the word *empathy* has been generalized to encompass a number of related positive emotions, often intertwining its meaning with affects like thoughtfulness, sympathy, enjoyment or kindness. Despite this inability to agree on a concise definition the general consensus is that the human empathic experience integrates two forms of empathy, cognitive and affective (Cuff, 2014). In addition, while there is overall agreement that compassion is linked to empathy some argue that compassionate empathy, where one responds to the feelings of others with a desire to help, is a third construct integrated into human empathy. With all three of our institutions aiming to encourage positive action for animals and the environment, this project will incorporate all three constructs as the human empathic experience.

The three constructs that together comprise the human empathic experience



Cognitive Empathy is the ability to identify or understand another's emotions. In other words, it's the mental process where one is able to see things from another's perspective, but not necessarily experience that same emotion.

Affective Empathy is described as the vicarious feelings or emotions that arise in response to observing the emotions or experience of another. In this construct one can physically feel the emotions or experience of another, sometimes as if they are contagious. (example: crying response when a movie's character has a sad experience.)

Compassionate Empathy, driven by cognitive and affective empathy, is the ability to feel and show appropriate concern in response to another's needs and be moved to help in some way. This construct can be a motivational basis for taking action to help others.

EMPATHY DEVELOPMENT IN CHILDREN:

Empathy, like other capacities, is developed over time and reinforced through our interactions with the world. Empathy is related to **theory of mind** in which we learn to predict our own actions and the actions of others.

Cognitive Learning:

- Our brains are constantly rearranging to accommodate our understanding of the world. The capacity for a brain to change is called **brain plasticity**. During the first few years of life we see twice as many connections than in adulthood.
- These connections are developed and reinforced through learning. Certain connections are reinforced and others are pruned away. As we age, the reinforced beliefs and understandings become more established but are not impossible to change.

If you imagine the individual connections in your brain as a trickle of water, each time you experience something that supports an idea you add another trickle, and another, until over time it becomes a river.

As educators, when we aim to change a person's understanding it is easier to redirect the flow of a trickle of water than a rushing river. The younger the brain the easier it is.

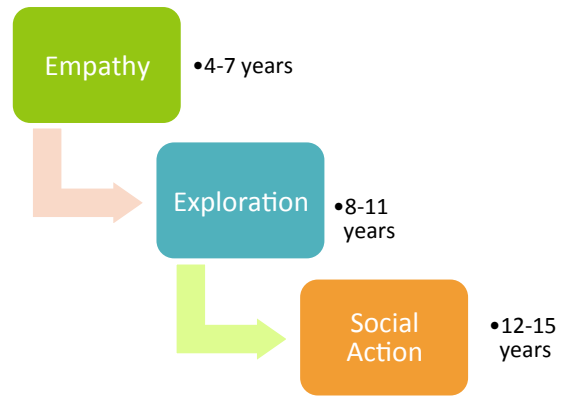
As we observe someone experiencing an emotion our brain responds as if we are experiencing the same stimulus. This process is the biological representation of what we call empathy and is made possible by **mirror neurons**.

- There is potential for empathy in most people's brains but mirror neurons' strength and effectiveness must still be developed through learning and some biological conditions affect how well mirror neurons function and grow (Gerdes, 2013; Goldman, 2014).

- There is limited research discussing whether mirror neurons respond to vitality affects displayed in animals the same way as humans but it is promising (Franklin et al., 2014; Sims et al. cited in Myers, 2007).

Stage Theory:

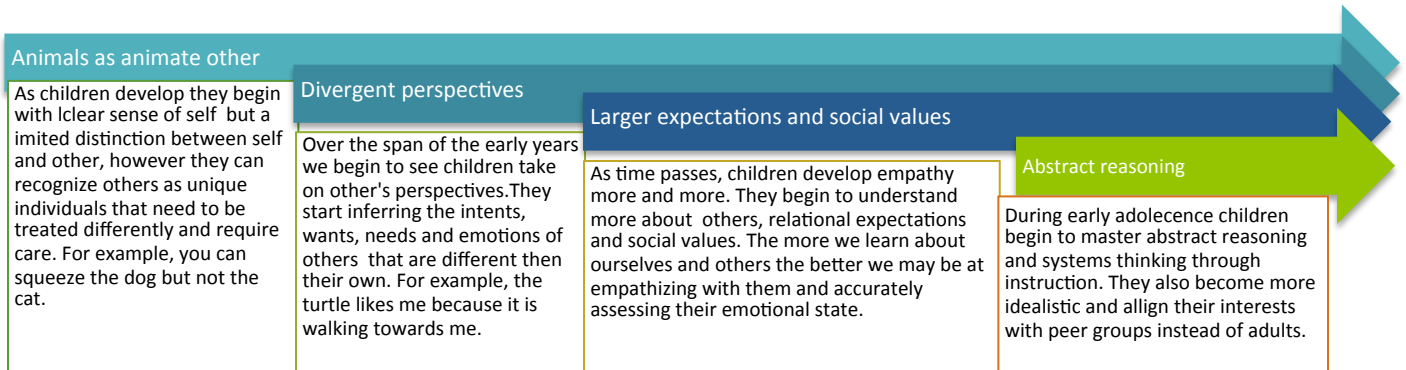
Learning theorists break development into stages dependent on age. This can be helpful for educators too as we develop programming. When referring to stages, it is important to remember these categories are ideal types based on general trends in development. Depending on life experiences individual students may move through these stages at different speeds.



Patterns of Engagement with the Natural World (Sobel, 1996)

David Sobel (2008) presents a view of nature engagement that is closely tied to the natural affinities, psychological state and cognitive needs of the child. He breaks this development into three stages based on larger developmental theory. From age 4-7 children lack a strong differentiation between self and other that allows for strong bonds to form between children and animals (Kohlberg & Piaget in Crain, 2000). When children reach the ages of 8-11 they become focused on the landscapes they can explore nearby through activities like caring for animals, gardening, fort building, and gathering. The last stage, social action, is also based off of Piaget’s learning theory. As children enter early adolescence, they are more capable of reasoning in abstract terms with instruction. This helps them to better grasp complex, multidimensional problems. It is at this stage they can better understand instruction of ecological systems thinking, and empathize with complex or very different perspectives (like that of a cockroach or barnacle).

Though empathy can grow and develop further at any age, the critical years in its development are early. During this time, empathetic behaviors are emerging and patterns of relating to one another are forming.



Developmental stages of moral development: (Myers, 2007; Myers 2008; Myers & Saunders, 2002; Kohlberg and Piaget in Crain, 2000)

EMPATHY TOWARDS ANIMALS:

Empathy towards animals is developed through the same processes as with humans and one does not need to be developed before the other.

There are certain unchanging properties of animate creatures, people included, that encourage our connection with others.

1. **Agency:** the animal shows similar behaviors of moving, eating, playing, social roles, grooming, etc.
2. **Affectivity:** Emotion is sometimes hard to observe in animals so we most often attribute emotions to vitality affect, or the animals patterns and qualities of arousal over time.
3. **Coherence:** The animal is easily understood as a whole animal. One impactful characteristic that designates subjectivity is the face, especially the eyes.
4. **Continuity:** More time spent with the animal increases a person's understanding of and empathy towards the animal.

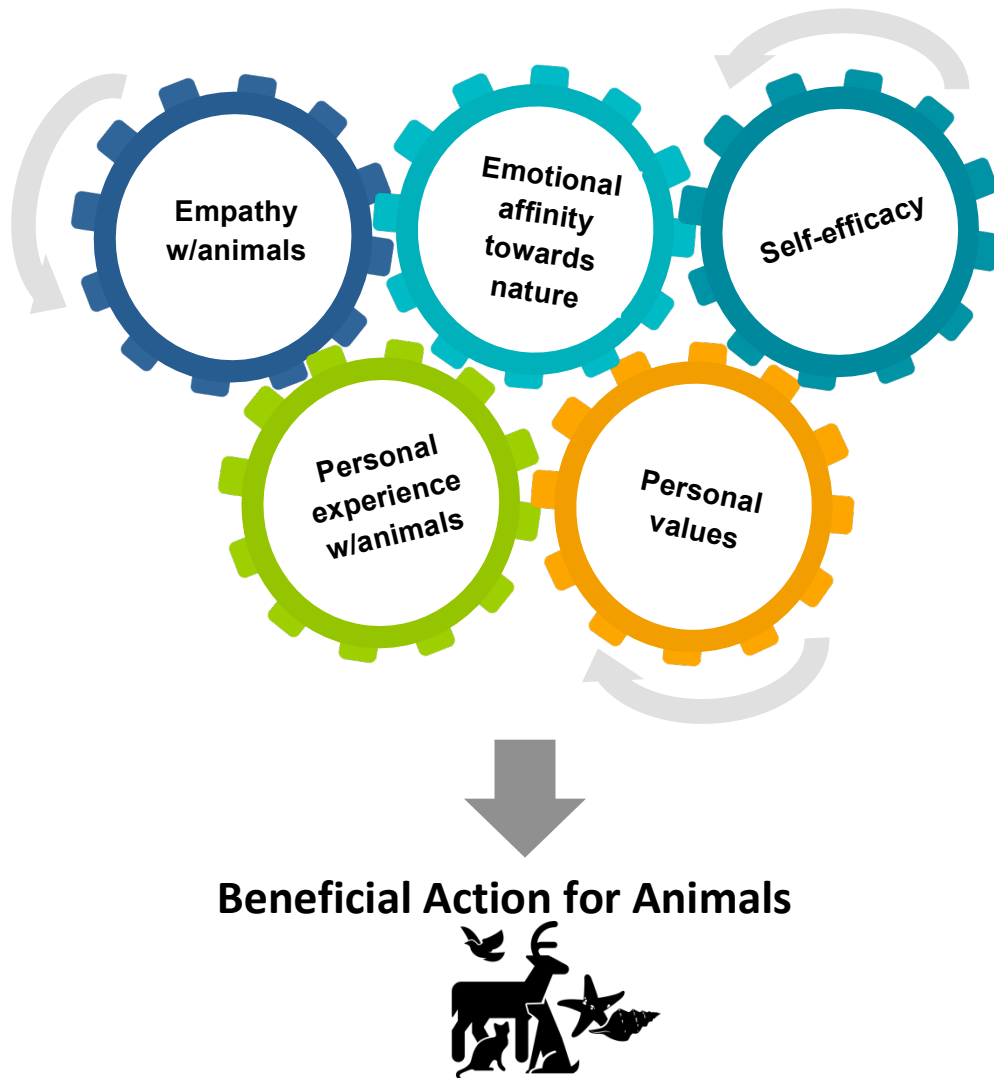
All animals fall roughly along a "potential to elicit empathy" spectrum between primates and well-trained dogs to invertebrates and microorganisms. Some animals inherently call to our emotional responses and others are more of a challenge. There are also other barriers to empathy like cultural stigmas, lack of species-specific knowledge, over emotionalizing, moral disengagement, conflicting messaging, narrative framing and environmental factors.

EMPATHY AND ITS RELATIONSHIP TO BENEFICIAL ACTION:

It is widely accepted that knowledge alone does not lead to action and that a person's attitudes and emotions play a significant role in his or her behavior. Similarly in regards to taking action to benefit animals and nature, researchers agree that there is no single predictor, but rather it is the relationship between several elements that can increase the likelihood of someone engaging in behavior beneficial to animals and nature. Empathy with animals has been identified as one of these influential factors (Berenguer, 2007).

Research has shown that having a high level of empathy with animals or nature can be a mediator to taking beneficial action on their behalf, but further research is needed to determine if there is a direct causal link between empathy and caring behavior. Instead many agree that there are additional affects and values that correlate to beneficial action, such as emotional affinity towards nature, feeling a part of nature, environmental self-efficacy, positive experiences in nature, and personal values (Cheng, 2012; Kals 1999). While zoos and aquariums may not be able to influence all of the relevant factors, with the growing understanding about the personal experiences that develop empathy as well as identification of best practices in fostering this skill, our institutions are in a well-suited position to impact our visitors' empathy with animals.

Empathy with animals is one of many factors that can lead someone to take action on behalf of wildlife.



Best practices in developing empathy in children:

Framing

- Children are constantly building and rebuilding their understanding of the world and language has the power to discourage or encourage empathy (Chawla, 2009; Ornaghi et al., 2013).

Modeling

- In moral development valued adults and teachers play an important role by modeling behavior, attitudes, expressing values and sharing pleasure in interactions with wildlife (Cheng & Monroe, 2012; Chawla, 2007; 2009; Arluke, 2003; Stout, 1999; Ornaghi et al., 2013; Myers, 2007).

Increasing Knowledge

- By increasing student's knowledge of their own emotions and the experiences of others, they can more accurately perceive the emotions of others (Myers, 2009; Myers & Saunders, 2002; Stout, 1999).

Providing Experiences

- By spending time in nature we are more likely to develop a connection with it (Blizard and Schuster, 2007; Chawla, 2007, 2009; Cheng & Monroe, 2012; Kals et al., 1999).
- Through interactions with animals we build relationships based on familiarity, observations, preceiving shared attention and providing care (Arluke, 2003; Kohl and Wenner, 2012; Myers, 2004, 2007; Myers and Saunders, 2002).

Practice

- An important part of promoting an ethic of empathy is providing opportunities to successfully practice the skill and giving positive feedback to when it is observed (Arluke, 2003; Chawla, 2007, 2009; Cheng & Monroe, 2012; Myers, 2009).

Activate Imagination

- Role-playing activates connections between emotions and thoughts, allowing individuals to experience what it is like to be the animals (Gerdes et al., 2013; Myers, 2007, 2009; Stout, 1999)
- Narratives create an empathic response by helping people identify with the characters and effecting the ways someone perceives an animals (Blizard & Schuster, 2007; Davis, Gerdes et al., 2013; Ornaghi et al., 2013)
- Mimicry can activate mirror neurons and help promote kinesthetic empathy (Gerdes et al, 2013; Myers, 2007; Varkey et al., 2006)
- Cognitively taking the perspective of another increases concern for its wellbeing (Berenguer, 2010; Davis et al., 1996; Myers et al., 2009; Ornaghi et al., 2013; Schultz, 2000)
- Comparing or relating animal experiences to our own can promote deeper connections (Arluke, 2003; Pekarik, 2004)

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