



## Altruistically Minded

Lesson by Bryana Williams M.S. CCC-SLP



[https://media.npr.org/assets/img/2016/04/27/istock\\_000017155114\\_small-d578918362bd9863aeb7cbb5aa0c502e3288b42e-s800-c85.jpg](https://media.npr.org/assets/img/2016/04/27/istock_000017155114_small-d578918362bd9863aeb7cbb5aa0c502e3288b42e-s800-c85.jpg)

LEMURS. They are cute, they are cuddly (...well maybe, I've never tried), and they are often a key feature in your favorite nature documentary. Most of the time the discussion centers on their unique adaptations-did you know there are over 100 different species, all of them native to MADAGASCAR??-or their supremely adorable love for sunbathing. But their feature in this lesson has nothing to do with their exotic floofiness and everything to do with a certain aspect of their behavior: ALTRUISM.

What animal did we use in this example? (Lemurs)

There are over \_\_\_ different species. (100)

Which area are lemurs native to? (Madagascar)

Why are lemurs being featured in this lesson? (They display altruism)

What does "altruism" mean to you?

In zoological terms, altruism refers to instances where an animal acts for the benefit of another without any benefit in return (and, sometimes, even at its own expense in terms of reproductive fitness, or the ability to produce offspring), and lemurs demonstrate this in spades. Within a CONSPIRACY of lemurs-yes, that is the actual technical term for a group of them!-animals of all ages and both sexes regularly take care of young lemurs completely unrelated to them, with no benefits to themselves. And they are not the only species like this!

The ability to produce offspring is known as what? (Reproductive fitness)

What is the term for a group of lemurs? (Conspiracy)

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What is the zoological definition of altruism? (Animal acting for the benefit of another without anything in return/at expense of its own reproductive fitness)

Lemurs will regularly care for babies that are not \_\_\_ to them. (Related)

What altruistic behavior do lemurs exhibit? (Taking care of unrelated young)

Can you think of another animal that displays altruism? (Bees, monkeys, humans, dolphins, etc.)



<https://i.ytimg.com/vi/vrFw31UKh68/maxresdefault.jpg>

For example, vampire bats regularly REGURGITATE (vomit, disgorge) blood and donate it to other members of their group who have failed to feed that night, ensuring they do not starve. In numerous bird species, a breeding pair receives help in raising its young from other 'helper' birds, who protect the nest from predators and help to feed the fledglings. Even in social insect colonies like those of ants, sterile workers devote their whole lives to caring for the queen, constructing and protecting the nest, foraging for food, and tending the larvae. There are numerous stories of INTERSPECIES altruism as well, such as when dolphins have helped shipwrecked people, holding them above the water for hours at the time while they wait for rescue.

What word means to vomit or disgorge? (Regurgitate)

What is another word for regurgitate that I mentioned?

Why do vampire bats regurgitate their food? (Ensure other members that didn't feed don't starve)

Dolphin help shipwrecked people in examples of \_\_\_ altruism. (Interspecies)

List an example of animal altruism from this paragraph.

But altruism, as we know, isn't just limited to animals. In humans, the psychological definition of altruism (i.e. "the belief in or practice of disinterested and selfless concern for the well-being of others") shows up when a good SAMARITAN helps an injured stranger after a car accident, or when we offer to mow the lawn of an elderly neighbor. We love warm and fuzzy moments like this, but they do present a conundrum: from a Darwinian perspective of "survival of the fittest",

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altruism doesn't make a lot of sense...so why do we consider it to be a defining feature of human behavior?

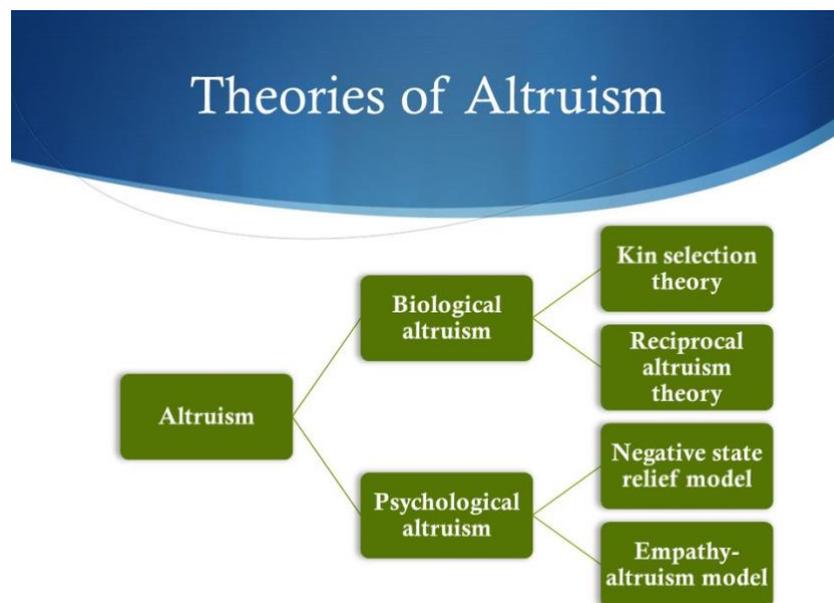
The \_\_\_ definition of altruism refers to the belief in or practice of selfless concern for others. (Psychological)

What is the psychological definition of altruism? (The belief in or practice of disinterested and selfless concern for the well-being of others)

What does the term "good Samaritan" refer to? (Charitable or helpful person)

Darwin's perspective of "\_\_\_" doesn't align with altruism. (Survival of the fittest)

What would drive you to do something that doesn't benefit you personally, that helps someone else?



<https://slideplayer.com/slide/4244140/14/images/11/Theories+of+Altruism+Altruism+Biological+altruism+Kin+selection+theory.jpg>

Now, I'm a bit of a psychology buff, so I did a bit of research on this and there are a number of theories which try and explain altruism, among them being KIN (family) selection theory, the selfish gene theory, reciprocal altruism theory, the negative state relief model and the empathy altruism model. While they all provide PLAUSIBLE explanations and points of view on the subject, they all seem to share in common the theme of EMPATHY (the ability to understand and share the feelings of another).

What is the term that means "family"? (Kin)

Name one of the theories of altruism. (Kin Selection, Selfish Gene, Reciprocal Altruism, Negative State Relief, Empathy Altruism)

What does "plausible" mean? (credible, reasonable, believable, etc.)

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Understanding or sharing the feelings of another is known as \_\_\_\_\_. (Empathy)

Define empathy according to the lesson.

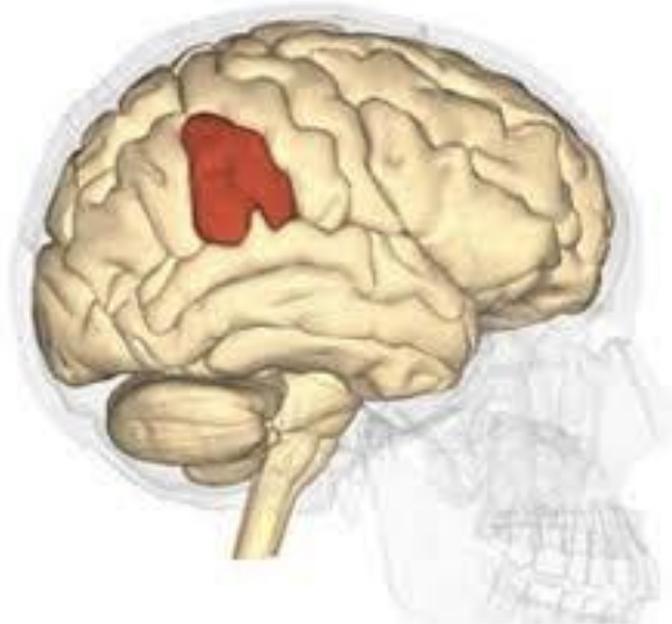
A little more research reveals that we are actually evolutionarily predisposed to feel empathy towards others-it is literally built into our brains! For instance, a subset of motor neurons called MIRROR neurons allow us to understand the actions of others, or literally “feel” another’s physical pain. They do this by performing a sort of virtual reality simulation when we observe another person, allowing us to imagine what a particular action (Ex. Throwing a ball) or sensation (ex. A pin prick) would be like for us.

We are \_\_\_\_\_ to feel empathy towards others. (Evolutionarily predisposed)

What type of neurons help us understand the actions of others? (Mirror)

How do they accomplish this? (Virtual reality simulation when we observe another person)

Brainstorm: What is a possible reason or reasons you can think of as to why mirror neurons might have adopted these functions?



The Right Supramarginal Gyrus (Red)

<https://www.psypost.org/2013/10/im-ok-youre-not-ok-the-right-supramarginal-gyrus-plays-an-important-role-in-empathy-20718>

While mirror neurons help explain our empathy of physical sensations, they don’t give the full story on empathy and altruism themselves: for that, we have to dig deeper into how empathizing with another’s EMOTIONS takes place. In a study published in the *Journal of Neuroscience* on October 9, 2013, MAX PLANCK institute researchers identified that the tendency to be EGOCENTRIC (i.e. self-focused) is innate for human beings. However, a part of your brain has developed to recognize a lack of empathy and autocorrect it: the RIGHT SUPRAMARGINAL GYRUS-located at the junction between the parietal, temporal, and frontal lobes- helps us to distinguish our own emotional state from that of other people and is

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responsible for empathy and compassion. But this raises the question “why?”. Why did this ability develop for us and, presumably, for some other species?

Which organization were these researchers with? (Max Planck Institute)

What date were their findings published? (October 9 2013, 10-9-2013)

They concluded that the tendency to be \_\_\_ is innate for humans (Egocentric)

What purpose, if any, do you think egocentricity might serve?

Which brain area is considered responsible for empathy and compassion? (Right Supramarginal Gyrus)

Name one of the lobes mentioned that the RSG is adjacent to. (Frontal, Temporal, Parietal)

Reflecting back on the lesson, why do you think humans and some other species are predisposed to be empathetic and/or altruistic?

Place your finger roughly in the place of the RSG on your own head.

As I’m sure you already guessed, altruism and empathy seem to show up primarily in species that live in complex social structures. Darwin noticed this, and made an adjustment to his theory: rather than survival being about the individual’s best interest, socialization meant that it was focused on the best interest of the *group*. For us, this indicates that our need to exist in a social sphere and to have a SOCIAL IDENTITY (i.e. a person’s sense of who they are, based on group membership) could be what ultimately drives empathic feelings and the resulting altruistic actions.

Altruism and empathy often show up in species that live in \_\_\_\_. (Complex social structures)

Darwin adjusted his theory to account for altruism and considered that socialization could have been about the best interest of the \_\_\_\_. (Group)

A person’s sense of who they are based on group membership is their \_\_\_\_. (Social Identity)

Define social identity.

Discuss Darwin’s adapted theory in your own words.

Social identity can encompass both the big and the small, from your nationality, to the activities you like to be involved in, to the Facebook groups you join, or even just the school you go to. All of this helps FIXATE (establish, define) who we are as individuals and creates a personal connection between ourselves and other people, a connection that drives us to invest in the wellbeing of others in our “group”. We see it in action when a person comforts a crying friend, all the way up to global projects like the Large HADRON Collider in CERN, Switzerland, a project where physicists from all around the world come together from loads of different cultures and countries to try and answer questions relating to our universe for the BETTERMENT (improvement) of humanity.

What word means to establish or define? (Fixate)

What does “Fixate” mean, according to the lesson?

Think of your own example of a “group” that might shape someone’s social identity.

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What's a group you might consider as part of your social identity?

The \_\_\_ project in Cern, Switzerland involves physicists from all over the world. (Large Hadron Collider)

What word means "improvement"? (Betterment)

This concept is huge! Rather than focusing on individual success or ESCHEWING (avoiding, abstaining from) empathizing, the worlds of zoology and psychology seem to implicate a need for the opposite. Our species owes much of our survival to this inherent ability to empathize-it is a strength we can continue to learn from and expand. According to a Ted Talk presentation by Ben Wright, in today's hyperconnected world, every time we sit down at the computer or check our phones we can instantly become connected to thousands, if not millions of people, worldwide, who all share the same groups as us. And maybe, just maybe, we can work together with those groups to create something better and bigger than ourselves to further humanity. In his closing words, "altruistic evolution is our future. We are all in this together."

"Avoiding" is another term for \_\_\_. (Eschewing)

In today's \_\_\_ world, we can reach others with our phones or computers. (Hyperconnected)

What does Ben Wright think can be achieved with this "hyperconnectivity"? (People can work together to better the world)

Creative Writing:

1. What do you think about the conclusions drawn here about empathy and altruism?
2. "Altruistic evolution is our future". What does this mean to you?
3. Write an acrostic poem about the word "empathy" or "altruism"
4. Think of a cause (either current or one you feel should be developed). What do you think the role of empathy and altruism plays or should play in it? Why?

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Bryana Williams, M.S., CCC-SLP, S2C Practitioner

The Growing Place, Atlanta & Nashville

Resources:

“Altruism and Smarter Societies” Ted Talk by Ben Wright

<https://www.youtube.com/watch?v=t8xDg3Ngq5c>

<https://www.lemurreserve.org/lemurs/>

<https://www.businessinsider.com/odd-names-for-groups-of-animals-2016-3#a-troop-or-barrel-of-monkeys-23>

<https://plato.stanford.edu/entries/altruism-biological/>

[https://greatergood.berkeley.edu/article/item/do\\_mirror\\_neurons\\_give\\_empathy](https://greatergood.berkeley.edu/article/item/do_mirror_neurons_give_empathy)

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