

First Unitarian Universalist Society of Albany  
**“Faith in Group Selection”**

Rev. Samuel A. Trumbore February 12, 2017

### **Call to Celebration**

We’re celebrating Charles Darwin’s birthday today! I invite you into our service honoring his ideas with some of his words:

From Darwin’s letters: “...But I own that I cannot see as plainly as others do, and as I should wish to do, evidence of design and beneficence on all sides of us. There seems to me too much misery in the world. I cannot persuade myself that a beneficent and omnipotent God would have designedly created the *Ichneumonidæ* with the express intention of their feeding within the living bodies of Caterpillars, or that a cat should play with mice... I feel most deeply that the whole subject is too profound for the human intellect. A dog might as well speculate on the mind of Newton. Let each man hope and believe what he can.”

The Origin of the Species:

“Thus, from the war of nature, from famine and death, the most exalted object which we are capable of conceiving, namely, the production of the higher animals, directly follows. There is grandeur in this view of life, with its several powers, having been originally breathed into a few forms or into one; and that, whilst this planet has gone cycling on according to the fixed law of gravity, from so simple a beginning endless forms most beautiful and most wonderful have been, and are being, evolved.”

From the Descent of Man:

“The following proposition seems to me in a high degree probable—namely, that any animal whatever, endowed with well-marked social instincts, the parental and filial affections being here included, would inevitably acquire a moral sense or conscience, as soon as its intellectual powers had become as well, or nearly as well developed, as in man. For, firstly, the social instincts lead an animal to take pleasure in the society of its fellows, to feel a certain amount of sympathy with them, and to perform various services for them... But the social instincts would still give the impulse to act for the good of the community.”

We’ll be developing the reasoning in this last quote supporting the evolution of social behavior in groups of human beings as we join together in the celebration of life.

## Readings

### [THE ORIGINS OF PROSOCIAL](#) by David Sloan Wilson

A turning point in my life came when I decided to study prosociality in the real world. ... The word “prosocial” refers to anything—such as an attitude, belief, behavior, or institution—that is oriented toward the welfare of others or society as a whole. It includes but goes beyond the word “altruism”, which implies that helping others requires a degree of self-sacrifice. The word “prosocial” is agnostic on that point. If it’s possible to do well for oneself by doing good, then so much the better.

My passion ... was to show how prosocial behaviors can evolve in a Darwinian world. Since natural selection favors individuals that survive and reproduce better than other individuals, it’s hard to see how prosocial behaviors (especially of the altruistic variety) can evolve. Yet, prosocial individuals can win the Darwinian contest if they confine their interactions to each other and avoid the depredations of more self-serving individuals. Darwin himself began this line of reasoning and I was carrying the same torch into the 21st century. It was a Big Idea with implications throughout the biological and human-related sciences. I could have spent my entire life inside the Ivory Tower.

What kicked me out of the Ivory Tower was my desire to study the eternal contest between prosocial behaviors (call them High-Pro) and more self-oriented behaviors (call them Low-Pro) playing out in the real world. Working with the superintendent of the Binghamton City School District, ... I was able to measure individual differences in prosociality in several thousand high school students. I was also able to measure the social support that these students received from their families, neighborhoods, school, churches, and extracurricular activities. Finally, I was able to tag all of this information to the residential location of the students, sticking to rigorous human subject research protocols of course.

Unsurprisingly, individual differences in prosociality resembled a bell-shaped curve, with a few extremely High-Pros, a few extremely Low-Pros, and most people in between. The most important result of the study was a high correlation (about 0.7) between the prosociality of the individual and the prosociality of the individual’s social environment. Very simply, those who gave also tended to receive, which is the basic requirement for prosocial behaviors to survive in a Darwinian world.

## Sermon

If Unitarian Universalists decided to canonize saints, Charles Darwin would be one of our first candidates. His theories of evolution continue to shake the religious and the scientific world over 150 years after he published them. He continues to be as disruptive to our way of thinking as both Polish astronomer Nicolaus Copernicus was with his discovery of the earth revolving around the sun and Isaac Newton was with his laws of physics. (Today is his birthday so we celebrate his life today.)

In case it has been awhile since you studied the theory of evolution in school, let me remind you of the basics. Evolution is driven by a process called natural selection. This process is described by Daniel Dennett as “the best idea that anyone ever had.” Steven Pinker, another well-known psychology professor and science writer, agrees because, “it explains one of the greatest mysteries in science, the illusion of design in the natural world.” In his words:

The core of natural selection is that when replicators arise and make copies of themselves,

1. their numbers will tend, under ideal conditions, to increase exponentially;
2. they will necessarily compete for finite resources;
3. some will undergo random copying errors ("random" in the sense that they do not anticipate their effects in the current environment); and
4. whichever copying errors happen to increase the rate of replication will accumulate in a lineage and predominate in the population.

After many generations of replication, the replicators will show the appearance of design for effective replication, while in reality they have just accumulated the copying errors that had successful replication as their effect.

If we are looking at the evolution of single celled organisms or flat worms or fish or clams or plants and insects, the survival of the fittest through natural selection seems like a fantastic explanation of the variation we see and the links between species based on small random changes in genetic material.

Where it starts to become more problematic is when we apply these ideas to people. Early on, Darwin’s ideas were used to create Social Darwinism. Herbert Spencer and others in the 19<sup>th</sup> Century popularized the idea that people are subject to these natural selection pressures just like plants and animals. The fittest individual human specimen was destined to survive and thrive while the weaker and less fit will be eliminated from the gene pool. Spencer coupled this thinking with its use to justify political conservatism, imperialism, and racism. It also ran directly counter to the religious ideas of caring for the poor, the sick and the vulnerable. Eugenics, the idea we can improve humanity by intentionally manipulating our genomes, was a natural corollary to these ideas. Unfortunately, the Nazis during World War II used it which discredited it. Though, genetic engineering is likely to bring it back as parent’s desire to select for tall, handsome, strong, and intelligent children.

So the use of Darwin’s ideas to apply to the human social world has been a very rocky road that has brought about some very strong negative reactions. So when the field of Sociobiology appeared in the 1970’s it was not welcomed by most in the social sciences. Sociobiology is based on the premise that some behaviors (**social** and individual) are at least partly inherited and can be affected by natural selection (Wikipedia).

One of the researchers in this area is [Dr. David Sloan Wilson](#). A professor at SUNY Binghamton and a Unitarian Universalist who participates in the congregation there, he became famous for his book investigating the application of Darwin's theories to the world of religion. The book, titled, *Darwin's Cathedral: Evolution, Religion, and the Nature of Society*, strives to make peace between science and religion.

One of the great battles that ought to be over but continues in modern times is between evolution and religion. Until now, they have been considered completely irreconcilable theories of origin and existence. David Sloan Wilson's *Darwin's Cathedral* takes the radical step of joining the two, in the process proposing an evolutionary theory of religion that shakes up both evolutionary biology and social theory. Wilson wants us to think of social groups like religious communities as discrete organisms and apply evolutionary ideas to the group rather than to the individuals in the groups. He thinks of morality and religious beliefs and practices as parallels to genetic adaptations that are, then, culturally preserved and transmitted. "Love thy neighbor," "avoid all pork and shellfish," and circumcision can become genetic units that can increase or decrease the fitness of a group that practices them. The collective practice of these individual adaptations can change the fitness of the group in a way that benefits the individuals in the group making them more fit.

I learned all about this when Dr. Wilson did a presentation hosted by our congregation on these ideas several years ago. There is a whole methodology of evolutionary biology based on these ideas called "group selection" or "multi-level selection." The basic idea of group selection looks at the group as a unit in the natural selection process rather than the individual. The fitness of the group shapes its survival rather than the fitness of the individuals in the group.

As you might imagine, these ideas fired my imagination when it comes to religious groups. The genes of Unitarian Universalism, so to speak, are our core values, habits and practices. The group, as an entity, wants to transmit its genes to the next generation and continue to exist. There is not just one UU entity but a thousand of us parallel to cells that have similar genes but also variations. Those variations cause changes within the group over time like mutations.

An example is our UU practice of chalice lighting. We didn't light chalices as part of the UU Fellowship in which I grew up. I remember when we started to light chalices in the early 1980's. I remember watching the gray hymnal come out in 1992 and gain popularity. I remember hymn 123, Spirit of Life sweep across our congregations and start to become a UU signifier. More recently, the Standing on the Side of Love campaign has helped shape our identity. There are units of culture, today they are called memes, that behave much like units of DNA that get transmitted through the process of replication and selection.

Let me pause here and say that Wilson's ideas are extremely controversial in the scientific community that studies evolution. That is because of the nature of groups. Wilson took inspiration for his work from the Hutterites, a religious sect from the sixteenth century that came to this country to avoid conscription in the nineteenth century. They regard themselves as a parallel to a

bee colony. “They practice community of goods (no private ownership) and also cultivate a psychological attitude of extreme selflessness.” They scorn the common explanations evolutionists use for the fitness of individuals which include favorable relations with relatives and reciprocity. Giving for Hutterites, “must be without regard to relatedness and without expectation of return.” Using these beliefs, this religious community has endured and thrived for many years. (ref. 1994 Wilson paper)

The problem, though, with using bee colonies, or ants, wasps, and termites for that matter, as models for human altruism is they share one set of genes. All the members of the colonies have the same genetic material thus have a biological as well as social reason to cooperate. And you’ll not see groups of ants or bees deciding to celebrate diversity and cooperate. On the contrary – they fight to the death, behaving as one body, not a social network parallel to humans.

There are other problems with group selection having to do with the nature of groups which often have fuzzy boundaries of inclusion and exclusion of individuals. Groups are also very vulnerable to corruption from within by “free-riders” who act like parasites within the group, consuming resources without contributing to the welfare of the whole. Characteristics of groups are often not constant enough over several generations to demonstrate an inheritable trait for all members of that group. Steven Pinker and others have written [strong critiques](#) of group selection. I’ve read them and am struggling to put the whole picture together right now.

This may be where the faith part comes into my title for this service. Whether evolution is exactly the right model to describe how groups grow and change, it is clear to all that some groups are far more successful than other groups. Whether that is because of a randomly selected genetic style mutation – however we understand that in groups – or just an individual trait that is selected for and expressed in group life, I’m very interested in what makes groups successful. I’m very interested in what can help our congregation survive and thrive.

The idea that Dr. Wilson brought to us at the workshop that got me excited was an innovative way to deal with the problem of the commons developed by [Elinor Ostrom](#). She was a political economist who studied the problem of sharing a common resource. The common example people use is a community cow pasture of a fixed size. If say ten people graze their cows in the community pasture, the pasture can only support a fixed number of cows without decreasing the amount of grass. But if one person secretly adds another cow, he will gain a disproportional benefit while degrading the resource for the rest. If each person starts doing that, the commons can easily be degraded further and may eventually be destroyed for all. The question that Ostrom contemplated was how to solve this problem and regulate the use of the commons. She came up with eight design principles derived from what she observed in various groups who successfully managed a common resource. Her work was honored with a Nobel prize in 2009.

Wilson and his collaborators took her eight design principles ([you can find them on the web](#)) and adapted them as design principles for groups that they believe could be grounding principles to support the fitness of any group. Those [eight parallel principles](#) are:

- 1) Strong group identity and understanding of purpose
- 2) Fair distribution of costs and benefits
- 3) Fair and inclusive decision-making
- 4) Monitoring agreed upon behaviors
- 5) Graduated sanctions for misbehaviors
- 6) Fast and fair conflict resolution
- 7) Authority to self-govern
- 8) Appropriate relations with other groups

We could go into detail about each one of these design principles, their value and their implementation. My goal today is to suggest them as design principles that can be used in our congregation – principles, happily most of which we are already using! Nice to get validation from outside for our congregational model.

Not that we couldn't improve what we do. One area that I spoke about last week that you now see as the first design principle is "strong group identity and understanding of purpose." We can do a better job of this, in my humble opinion. Mission, strategic plans, and covenants are some of the ways we do this. There are other ways we can strive to build our group identity to help it get clearer and clearer. I recognize that as part of what I do ... but it must be an interactive process. And thankfully we have a very strong identity already. Every time I visit another UU congregation, I immediately know I'm with my people. I'm sure many of you have had a similar experience. Going to our yearly General Assembly is a collective experience of validating that shared identity. But that identity isn't static, it changes and evolves over time, while at the same time having consistency with who we have been in the past.

Whether these principles are really samples of some kind of institutional DNA or part of a group genome that has evolved as a successful group fitness strategy isn't too important to me right now. A successful group needs to be open to innovations that can improve its fitness that is consistent with its purpose. Clearly these design principles meet that test. They have affinity with the core values that define us and give us our group identity. Please let me know if you'd be interested in doing a class or study group to dig into Dr. Wilson's ideas – maybe even have him come back and do a workshop for us. I sense something important here that could be of benefit to our congregation.

An example of the potential benefit comes from research on the egg laying habits of chickens in confined spaces. While I don't endorse the practice of putting lots of chickens together in small cages for egg production, a very interesting experiment was run in one such hen house. In one group of cages, the star egg laying hens were selected for during breeding. That makes sense doesn't it? If you have six hens that lay eggs in a cage, you want more of the hens in that cage who lay lots of eggs. The second group of cages selected for hens that laid a good number of eggs but also got along well with the other hens – the prosocial hens – in the cage. After several generations of hens, the researcher showed a picture of the high performing hen's cage. They looked terrible, injured and missing lots of feathers. The high egg producers also had an aggressive characteristic that reduced the population of the cage as they injured and killed each other. And their laying capacity decreased significantly. The prosocial hens looked great, were quite happy, and laying collectively far more than the high laying individuals.

Now I don't know how this research translates to religious communities, but it definitely stimulates my confidence in the power of prosocial behavior. Whether altruism and cooperative behavior is a trait that comes from individual selection or group selection, I know that it makes group life better. Whether our faith in prosociality comes from God or from evolutionary biology, may we celebrate human community and strive to help it thrive and grow here together.

## **Benediction**

I'd like to close with a tribute to Darwin's modesty. Given the earth shaking work he did in his lifetime, it might be a little surprising to find out he wasn't full of himself. He never considered himself special.

He confessed in his memoirs: "I have no great quickness of apprehension or wit which is so remarkable in some clever men ... my power to follow a long and purely abstract train of thought is very limited ... my memory is extensive, yet hazy." Yet he concluded with this humble statement: "With such moderate abilities as I possess, it is truly surprising that thus I should have influenced, to a considerable extent, the beliefs of [the] scientific [community] on some important points.