On April 25, 2011, seven visiting scholars traveled to DePauw University to speak at the “Ethics after Darwin” conference at The Janet Prindle Institute for Ethics. They came from various fields of expertise: evolutionary biology, ecology, anthropology, philosophy, and law. One of the scholars, evolutionary theorist David Sloan Wilson, was integral in putting the conference together. He visited the Prindle Institute the year before to participate in the Institute’s annual Undergraduate Ethics Symposium at which he noticed only two of the thirty undergraduate students were schooled in contemporary evolutionary theory. He thought a forum to educate undergraduates in both ethics and evolution would be fruitful, and thus the conference was born. In partnership, the Prindle Institute and the Evolution Institute, founded by Wilson and his partner, Jerry Lieberman, expeditiously put together “Ethics after Darwin.” At DePauw University, faculty prepared students for the conference months in advance: Prindle Sieg-Dunlap Research Assistant, Rahul Abhyankar, gathered books and journal articles written by the visiting scholars and placed them on a Moodle site for students and faculty to access. Kevin Moore, Professor of Psychology, held a special quarter-credit class devoted to evolution, ethics, and public policy. Students applied to be a part of the class, and Professor Moore ensured that students from a variety of educational backgrounds would be included to enhance discussion.

The conference kicked off with a private, morning workshop for the visiting scholars, DePauw faculty, and Prindle staffs in which candid thoughts on the direction of the conference were encouraged. To spark discussion, Professor Wilson outlined the objectives of the workshop which he entitled the past, the present, and the future. In terms of the past, he desired the speakers discuss
social inequalities such as eugenics which were justified by scholars of evolution. To learn from the past is to learn from the social injustices of social Darwinism. In terms of the present, he desired speakers elaborate on how evolutionary theory has influenced ethical theory. To what extent can empirical facts help us determine what’s good, what’s bad, what’s right, and what’s wrong. In the future, our values that have been refined by evolutionary theory must be reflected in our policies: how can lawmakers use contemporary evolutionary theory to produce effective public policy?

It is hard to describe the discussion on evolution and ethics that morning; feisty may be a good word. Placing a dozen scholars in one room each skilled in supporting their arguments and criticizing others’ proved a recipe for aggressive debate. Philosophers at odds with scientists and scientists in conflict about current research foreshadowed the struggle that would become obvious by the end of the conference. The struggle to understand evolution’s relationship to ethics (let alone applying the relationship to public policy) is quite far from resolution.

Though the visiting scholars met with individual classes during lunchtime each day, their formal presentations were made during the afternoon and night in Prindle Auditorium. The first session on April 26th entitled “History of Darwin’s Idea: How it Started and Where it is Now” was moderated by Professor Moore and featured talks by Melvin Konner, Professor of Anthropology at Emory University, and Janet Radcliffe-Richards, Professor of Practical Philosophy at Oxford Uehiro Centre. Professor Konner presented the history of the abuse of Darwinism as well as the brighter side of modern evolutionary humanism. Colonialism, imperialism, and mass murder of the disadvantaged and discriminated were rationalized with Darwinian theory. Concepts such as eugenics and “fitter family contests” were a product of social Darwinism: eugenics became so pervasive that the U.S. Supreme Court upheld a statute instituting compulsory sterilization of the unfit including the mentally retarded in *Buck v. Bell* (1927). The last few decades saw the rise in evolutionary humanism, i.e. researchers strove
to provide strong empirical research on human goodness and altruism. Pioneers like W.D. Hamilton, Robert Trivers, David Sloan Wilson, and E.O. Wilson provided evidence and explanation for kin and reciprocal altruism in various species, and it became clear that groups were not simply made up of selfish individuals. Trance dance rituals in hunter-gatherer communities, such as the !Kung, show a full range of cooperation between pairs of unrelated individuals; such practices depict a more positive view of human nature beyond selfishness and greed. Konner believes evolutionary theory can help us improve our awareness of hidden motives some of which are good and some of which are not. If we are thoughtless and pay no attention to veiled desires and inclinations, we set ourselves up for failure. This is a view not only held by evolutionists, but interestingly, religious leaders as well. We can create optimal environments for human flourishing if we are aware of our strengths and weaknesses both as selfish individuals and as altruists.

Professor Radcliffe-Richards also gave a historical account, but she focused more on philosophy starting with Aristotle’s work in the 4th Century B.C. Aristotle believed in a sphere of the prime mover (what he thought of as God) that existed beyond the earthly realm. The earth and its inhabitants were inferior to the prime mover: by cultivating our virtues we could reach a level of pure reason characteristic of God. To understand the nature of things for Aristotle was to understand their proper place in the scheme of things, i.e. to understand the harmony of the universe as a whole. In the Judaic tradition, God came into chaos to create harmony; he had goals and plans as well as a set of rules. If an individual understood his or her place in the universe as developed by God, he or she would be fine. Otherwise one would get fire and brimstone. Similar to Aristotle, to understand the world was to understand how one ought to behave. The Christian tradition incorporated angels, but the same structure remained: the rational, human soul strove to ascend to higher levels in the Great Chain of Being. Again, to understand the world was to understand the order of things and how one ought to behave. Things changed with Darwin: evolution is not the product of plan or design. There is not the
slightest reason to believe that evolution is a good or a product of pure reason. For Darwin to understand the nature of something was to understand a series of conditionals (causes and effects), not how something ought to be or ought to act. Alien to tradition, Darwin separated the natural and moral worlds. Ultimately then empirical evidence on evolution tells us nothing about how we ought to behave. Scientists often take values for granted without discussion, but ethicists have values foremost in their minds. The is-ought problem is a classic problem in philosophy: how can we derive value from factual claims? To move from description to ethical prescription would be to make a naturalistic fallacy. The big problem in ethics is that we have not figured out how to live together; empirical evidence may teach us a lot about our natures, but alas, it cannot resolve fundamental problems in ethics for us.

The afternoon session left attendees in distress. What had we learned? Well, we learned much about the history of science and philosophy as it pertains to evolution, but we were left wanting more from the sketchy-at-best relationship between evolution and ethics. It seemed that the evening session entitled “Evolution and Gender: Ethics and Public Policy” moderated by DePauw Professor of Biology, Jim Benedix, might be hasty or inappropriate. After all, how could we discuss public policy if we had not made headway on the ties between evolution and ethics? Nevertheless, Julie Seaman, Associate Professor of Law at Emory University, and Patty Gowaty, Professor of Ecology and Evolutionary Biology at UCLA, were up to the challenge. Professor Seaman focused her talk on cases that dealt with discrimination and how an understanding of evolution could affect requisite laws. Section 1 of the 14th Amendment states that “no state shall... deny to any person within its jurisdiction the equal protection of the law.” Though judges are not currently open to arguments from evolution, they do at times make arguments from what they call “facts of human nature.” Racial discrimination is reviewed under strict scrutiny by the courts: laws are struck down unless they are necessary to compelling government interests. Sex discrimination is reviewed as well: what matters is government interest, but more importantly, a law must be related to a “real difference” between men and women. “Real difference” is
a vague term. What counts? For example, laws regarding pregnant women in the workplace point towards a “real difference” between the sexes, but other cases are less clear. 2009 world champion middle distance runner, Caster Semenya, was subjected to gender tests after questions were raised about a possible unfair advantage. In sports there are real, physical differences between the sexes. Professor Seaman notes, however, that we do not prevent young boys from trying out for older teams where presumably the same physical differences apply. Why, then, do we accept gender segregation in sports? Similarly there are laws against same-sex marriage, but Professor Seaman wonders if allowing infertile couples (man and wife) to marry is consistent under the equal protection clause. Perhaps evolutionary knowledge can help us understand the nuances of such cases, and perhaps we can come to understand where our biological and cultural determinations come from. The field of cultural evolution is a burgeoning area of research. It is clear that lawmakers can benefit from more information from evolutionary theorists even if in the end evolution is deemed irrelevant in some cases.

Professor Gowaty was disparaging in her account of studies done on sex differences. As not only a scientist but a feminist, she notices how influential prejudice can be on so-called good, empirical research. She thinks that some applications of evolutionary theory on sex are spin or propaganda, and her own research is quite critical of a foundational paper written by A.J. Bateman in 1948 entitled Intrasexual selection in Drosophilidae. Darwin himself observed choosy, coy females and indiscriminate, profligate males, but he did not explain why the sexes acted in these ways. Bateman provided that explanation: while a male can produce more offspring by mating with multiple females, a female will not produce more offspring by mating with more than one male due to her limited number of eggs. The limiting agent for female reproductive success is her eggs, but the limiting agent for male reproductive success is the number of females he can mate with. The result is sexual selection, i.e. a state in which males compete with each other and females become choosy. This has become common knowledge in biology. Bateman’s paper is one of the most cited papers in history, but Professor Gowaty provides a
scathing review showing a number of “elementary errors” in his work. She believes such carelessness is exemplified by a statement made by Sir Francis Bacon – “For what a man would rather had true, he more readily believes.” Nepotism and sexism permeate peer-reviewed work, and she wonders where such biases are fostered. Before we can theorize, we must make sure that science is done well and our experiments are run properly.

From Aristotle to eugenics to Bateman to same-sex marriage, the lectures on the first day of “Ethics after Darwin” covered thousands of years of evolutionary theory in a matter of hours. The lectures on the second day did not provide the same breadth, but instead focused more on practical application of evolutionary principles especially in the realm of ecology. The afternoon session on April 27th featured Stephen Hubbell, Professor of Ecology and Evolutionary Biology at UCLA, and Sahotra Sarkar, Professor of Philosophy at the University of Texas, in a series of talks entitled “Conservation and Evolution: Ethics and Public Policy” moderated by Dana Dudle, Associate Professor of Biology at DePauw University. Professor Hubbell identified the poor science that is done to promote conservation: researchers see what they want to see to support what they think is right. The premise of conservation is that non-human life has standing – at least legal if not moral. In 2008, the Spanish parliament extended human rights to apes; in Switzerland, the government considered protection of the “plant dignity” of roses. Many governments are heavily invested in the conservation of non-human life to the tune of millions of dollars. Let us not, however, take the concept of conservation for granted: can conservation be justified ethically, and are there good empirical bases for the practice? We humans have a fundamental kinship to the rest of life on earth; the most compelling evidence for evolution is in molecular genetics – our genes are quite similar to apes, fish, fruit flies, and even fungi. Our genes are not so different from the rest of the world and neither are our behaviors: we cannot claim to be the only tool users or users of symbolic thinking. Kanzi, an exceptional bonobo, understands 1500 words and can write in complete sentences including conditional “if/then” statements though she lacks vocal cords.
Despite these similarities, Professor Hubbell admits it is not clear whether or not humans have an obligation to conserve what’s around us. He tends to think our moral obligations toward nature are of the aesthetic variety. If we suppose, for the sake of discussion, that humans have an obligation to protect non-human life, how can empirical evidence direct us? What is the rate of current extinction, and to what extent are humans responsible? A recent article in Nature suggests that the Earth’s sixth mass extinction has already arrived due to examination of the species area curve, a relationship between the area of a habitat and the number of species found within that area. Professor Hubbell uncovered a fundamental flaw in the species area curve that results in overestimation of extinction rates; Hubbell thinks researchers did not catch the mistake earlier because they wanted to defend a “sky is falling” view to raise money for conservation. If the sky really isn’t falling, then funding for the cause shall dwindle; in fact, some of Hubbell’s peers desired his discovery not be published for the sake of the cause. Though Professor Hubbell is a lover of nature and founder of an NGO (the National Council for Science and the Environment) and understands the difficulty of lobbying for government funding, he asserts that we have an ethical obligation to correct errors: scientists ought to seek the truth whether results are self-serving or not.

Professor Sarkar discussed the “is-ought” fallacy in-depth in terms of conservation. His talk was highly philosophical, and it was clear that Sarkar possessed a wealth of knowledge in contemporary theory and argumentation in support of conservation. He favors arguments that do not engender the “is-ought” fallacy. There are, however, many popular arguments that cannot escape it. The Biophilia Hypothesis by E.O. Wilson claims that humans have an innate predisposition to bond with other species. Though evidence is scarce in support, let’s suppose Wilson is correct. The only way to generate ethical obligation from this hypothesis is to claim that these innate predispositions to bond with other species are the dispositions we ought to have. However, this is not clear; to simply assume this disposition is to commit an “is-ought” fallacy. Environmentalist Aldo Leopold championed holistic rationalism: humans
take part in a community of beings and in this way are highly related to non-human life. To arrive at an obligation to conserve is to claim that humans have intrinsic value and thus related entities have intrinsic value as well. It is not clear, however, why this must be the case. Obligations in regard to degrees of relatedness need further support. One argument that does not commit a stretch from “is” to “ought” is an argument Sarkar calls “transformation of demand values.” It is the idea that nothing in biology makes sense except in the light of evolution. Enlightened self-interest requires the conservation of other forms of life. In this case, obligation stems from a human desire for knowledge: it suggests nothing about the nature of living organisms, and why, due to that nature, organisms must be saved. Interestingly, it may be that our desire to learn more about evolution could create an obligation to protect those non-human creatures that many humans desire to care for with no study or research in mind.

The final lecture of the night and of the conference was entitled “Evolution, Ethics, and Equality” moderated by Jeff Dunn, Professor of Philosophy at DePauw University, and featuring David Sloan Wilson, key organizer of “Ethics After Darwin” and Professor of Biology and Anthropology at SUNY-Binghamton. Wilson began his talk explaining his main area of expertise (multilevel selection theory) and then presented cases in which evolutionary knowledge helped promote equality in classrooms and drug stores in New York. It is not obvious how altruism has persisted through time – Darwinian “survival of the fittest” seems to suggest that selfishness is king. Multilevel selection attempts to explain the persistence of altruism: while social adaptations like altruism tend to be locally disadvantageous (within groups), they are advantageous at a larger scale (between groups). Between-group selection promotes altruism, and if between-group selection dominates within-group selection, the groups become so cooperative that they become a higher-level organism. What is cooperation all about? Perhaps it has something to do with morality – the suppression of unfair advantages within groups. It is Professor Wilson’s belief that equality is required for the good life in all levels of sophistication from hunter-
gatherer societies to modern societies. One ability that set humans apart from the rest of the primates is the ability to throw stones, and once we could throw stones, we started throwing them at each other to suppress deviance. Our unique scleras (the white of the eye) rendered more cooperative eyes as well, since these conspicuous scleras make it easier to tell where an individual is looking and so enhance non-verbal communication. Along with dance, music, and visual art we humans developed many means of cooperation. How then can we produce better, less discriminating societies? 2009 Nobel Prize winner in economics, Lin Ostrom, is set to answer this question. Her ingredients to manage a common pool of resources include clearly defined boundaries, proportional costs and benefits, consensus decision making, monitoring of troublemakers, graduated sanctions, fast, fair conflict resolution, local autonomy, and polycentric governance. These concepts, Wilson claims, converge nicely with pro-social evolutionary theory. Becoming wise managers of evolutionary processes and putting these ingredients to use rendered remarkable results albeit at relatively small scales. Unusually rowdy elementary students were told to play a game. Students in class decided what counted as good behavior by consensus, and then the class was divided into groups in a competition to be good. The game was initially played for short periods with immediate rewards, but then the contest was played for longer intervals, unannounced, with delayed rewards until good behavior became the culture of the classroom. As a result, the class has a smaller criminal rate and a higher graduation rate. A similar method was employed at convenience stores: rewards were given to store clerks who abided by the rules and did not sell cigarettes to minors. If clerks failed to behave, undercover buyers would punish them. Gradually adherence to the law became part of the culture of the city. What’s the take home message? Evolution need not be worn on one’s sleeves to change society – silent understanding is enough.

The lectures from “Ethics after Darwin” may leave one puzzled about the study of evolution, ethics, and public policy, and that befuddlement is appropriate. It is not clear how the fields connect, and the interdisciplinary study is quite new. That is not to say, however, that the study is fruitless. A
better understanding of our natural (perhaps subconscious) proclivities can help us in determinations on values, morals, and virtues. With more refined ideas about ethics and evolution, we can create environments and public policies that cater to and enhance human flourishing in a more ethical manner. This is the ultimate goal, and who knows, maybe an attendee from this conference will lead the way.

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■ Rahul D. Abhyankar