

Creating an Evolutionary Studies Program at Your Institution

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Many of my colleagues who experience EvoS wonder if it can be replicated at their own college or university. The short answer is “Yes.” Just as evolution is famously described as a tinkerer, building new structures out of old parts, EvoS was initially built out of parts that already existed at Binghamton University. Glenn Geher and his colleagues built the second EvoS program from existing parts at SUNY New Paltz, a four year liberal arts college (<http://www.newpaltz.edu/evos/startown.html>). We think that *most* institutions of higher education, from major research universities to community colleges, have the available parts to build versions of EvoS—and we are eager to work toward the goal of a nationwide consortium.

The most important initial condition is a group of faculty across a variety of departments who are already teaching and/or conducting research from an evolutionary perspective. A very modest investment on the part of the Administration can be sufficient to create a program that facilitates their interactions and makes their courses available to students from other departments. Most administrators already value integration and are eager to reward this kind of initiative. Students who have been turned on to evolution by a single course or their own reading are eager to join a multi-course program. Additional faculty who are curious and open-minded about evolution, but have not yet acted upon their interest, are eager to become involved. In this fashion, the modest initial investment results in a positive feedback process. More and more students and faculty become involved, utilizing whatever intramural and extramural resources are at hand.

For faculty who which to become involved, achieving professional level competence can be remarkably easy. In an analysis that I conducted of the prestigious journal *Behavioral and Brain Sciences*, not only were over 30% of the target articles written from an evolutionary perspective, but the majority of authors were trained in other disciplines and acquired their evolutionary expertise on their own. Becoming involved in EvoS is therefore not a diversion from one’s profession but an important professional training activity.

It is important to realize that EvoS does more than teach evolution across the curriculum. It also helps to solve a more general problem in higher education—the fragmentation of knowledge. Here is how I put it at the beginning of my book *Evolution for Everyone: How Darwin’s Theory Can Change the Way We Think About Our Lives* (p. 2):

The Ivory Tower would be more aptly named the Ivory Archipelago. It consists of hundreds of isolated subjects, each divided into smaller subjects in an almost infinite progression. People are examined less with a microscope than with a kaleidoscope—psychology, anthropology, economics, political science, sociology, history, art, literature, philosophy, gender studies, ethnic studies. Each perspective has its own history and special assumptions. One person's heresy as another's commonplace.

Unity of knowledge has always been the ideal of a liberal arts education and almost everyone in higher education agrees about the importance of integrating across disciplines. Unfortunately, these commonly held goals cannot be realized in the absence of a common language that can be spoken across disciplines. Evolutionary theory provides a common language—a single explanatory framework that can be used to organize knowledge across a diversity of subject areas. This integration took place in the biological sciences over the course of the 20th century, but only now is it taking place for most human-related subjects. As I put it at the end of *Evolution for Everyone* (pp. 348-9),

I sometimes wonder what it must have been like to be present during the early days of Darwin's theory, when the idea was so new and so much remained to be discovered. Then I realize that I *am* present during the early days of Darwin's theory. The intellectual events taking place right now are as foundational as the events of 150 years ago. How amazing that virtually everyone can partake in the excitement, as an observer or a participant, as I hope you have seen on the basis of this book.

In short, we aim to turn the Ivory Archipelago into the *United* Ivory Archipelago!

Major ingredients of an EvoS program

Every university and college will have its own set of initial conditions, which prevents EvoS from being replicated in a cookie-cutter fashion. Nevertheless, most EvoS programs will probably need to include the following major ingredients.

- **An introductory “Evolution for Everyone” course**, preferably taught at the 100 level and available to all majors. This is an excellent course for satisfying General Education requirements, providing an additional incentive for students to enroll. An introductory course for graduate students is equally desirable for Masters and PhD granting institutions.
- **A menu of courses that can be taken after the introductory course.** Courses that are already being taught across campus can provide the additional selection. Merely making them visible to students in any given department is an important and easily taken step toward coordination. Additional courses can be added as interests and needs warrant. All

faculty who are committed to teaching alter the contents of their courses and replace old courses with new ones as their interests and priorities change. A program such as EvoS can channel this energy in the direction of evolution-related courses without an increase in overall course load.

- **A multi-course curriculum program** that does not impose an undue additional course burden on the student. At Binghamton University, students are required to take 20 credits (with distribution requirements), resulting in a certificate in evolutionary studies along with one's diploma. The certificate can be earned in parallel with any major and courses can count for both certificate and major requirements, avoiding the undue additional course burden. Other colleges and universities might need to arrive at different solutions based on their initial administrative conditions.

- **A campus-wide seminar series** that features talks on a diversity of subjects from an evolutionary perspective. The EvoS seminar series has become an important part of intellectual life at Binghamton University, usually attracting audiences of over 100 people. The seminars span the biological sciences, the human related sciences, and the humanities. They are not watered down for a general audience but are similar to what the speakers would give in a departmental seminar at other institutions. Yet, all of the seminars are attended by a single audience of undergraduate students, graduate students, and faculty from many departments, demonstrating what it means for evolution to serve as a common language that can be spoken across disciplines.

- **A two-credit "current topics" course** built around the seminar series. At Binghamton University, students who are earning the certificate are required to take a 2-credit course built around the EvoS seminar series for at least two semesters. The course requires reading one or more articles and writing a commentary in preparation for each seminar, attending the seminar, and attending a casual dinner (pizza and beverages) and continuing focused discussion with the speaker after the seminar. This course provides an unparalleled opportunity for undergraduate students to interact directly with some of the most dynamic scientists of our age, repeated for approximately 20 different topics over the course of two semesters, all from a single theoretical perspective. It also gives undergraduate students a chance to interact with each other, graduate students, and faculty in a socially pleasant but intellectually focused setting. This course has become enormously popular and many of the students describe it as their best academic experience.

- **Mechanisms for facilitating collaborative research.** EvoS was initiated as a teaching program at Binghamton University but almost immediately started to foster collaborative research among the faculty and graduate students, often with the involvement of undergraduates. We have recently been designated an Institute for Advanced Studies, providing funds for strengthening our research component.

Creating a nationwide consortium of EvoS programs

Any college or university can start an EvoS program on their own, but there are also potential benefits of coordinating programs across institutions, including the following:

- **Assistance with promoting and setting up the program.** Glenn Geher and I are eager to share our enthusiasm and experience with faculty groups who are trying to get organized and interest their administration in starting an EvoS program.
- **Coordinating the introductory “Evolution for Everyone” course.** At Binghamton University, students first read *Evolution for Everyone* and then learn about specific topics in more detail. Each topic is organized as a module that includes readings and an activity such as an experiment that can be performed and analyzed by the students. This organization allows modules to be developed and shared across institutions, for classes at different institutions to conduct the same module at the same time to increase sample size and compare results, and so on.
- **An archive of videotaped EvoS seminars made available on the internet.** This would be especially useful for programs that do not have the resources to bring many speakers directly to campus.
- **Shared assessment services.** EvoS-Binghamton is currently developing an assessment strategy that includes before-and-after surveys of single courses and tracking students through the multi-course program. This assessment strategy can be shared, enabling rigorous comparisons between institutions and saving the cost of having each institution develop their own strategy.

Getting started

Please contact David Sloan Wilson at Binghamton University or Glenn Geher at SUNY New Paltz if you wish to discuss starting a version of EvoS at your institution. The following resources might be useful to share with colleagues and administrators.

Wilson, D. S. (unpublished). “Creating an Evolutionary Studies Program at Your Institution.” (this document as a pdf file).

Wilson, D.S. (2005). “Evolution for Everyone: How to Increase Acceptance Of, Interest In, and Knowledge About Evolution”. *Public Library of Science (PLoS) Biology* 12:1001-1008. An article length description of the introductory course and multi-course program.

Wilson, D.S. (2007). *Evolution for Everyone: How Darwin’s Theory Can Change the Way We Think About Our Lives*. Bantam Press. A book-length account of the vision behind EvoS, written for the full intellectual spectrum, from beginning students to faculty in all disciplines. In his endorsement on the back cover, E.O. Wilson writes: “*No other author has managed to combine mastery of the subject with such a clear and interesting explanation of what it all means for human self-understanding. Aimed at the general*

reader, yet peppered with ideas original enough to engage scholars, it is truly a book for our time.”

Wilson, D. S. (unpublished). “On the Status of Evolutionary Research in the Human Behavioral Sciences and Evolutionary Training in Higher Education.” This analysis of the journal *Behavioral and Brain Sciences* demonstrates that evolutionary theory has already arrived as far as research in the human behavioral sciences is concerned, but is not yet reflected in the structure of higher education. *Any college or university that fails to teach evolution in relation to human affairs is out of touch with current scientific research.*