

### ***Why Do We Require That Doctoral Students Take The Preliminary Exam?***

Let's face it, preliminary exams are an ordeal. The preparation for them can be demanding, the taking of them stressful, and the outcome sometimes deflating. So why does the faculty subject you to this?

One answer that might come to mind for you is "Because they are a rite of passage." They are not, although it is tempting to see them as such. After all, every doctoral student takes these exams in some form or other in every department in every university in the nation, we faculty members took them when we were graduate students, our advisors took them when they were graduate students, and when you think about this you get a sense that preliminary examinations create a chain that links graduate students in time and space into one great circle of suffering.

There are far better answers.

The preliminary examination serves three purposes. First, it helps your supervisory committee diagnose your command of a subject. By "command" we mean what you know about the subject, how familiar and comfortable you are with ideas and evidence on the subject, and how well you can extrapolate from your knowledge of the subject to answer questions about the subject you might not have anticipated. If your command of the subjects of the exam is deemed sufficiently strong, you "pass" the exam and advance to candidacy. From the committee's point of view, making this diagnosis is the primary goal of the examination. Once you advance to candidacy, you will be devoting most of your remaining time in graduate school to conducting your research. A doctoral candidate must be able to plan and execute her or his research rigorously and interpret and disseminate its results insightfully. Diagnosing your command of a subject tells the committee, and you, whether you are ready to accept that responsibility.

That diagnosis will also identify a subject or two to which you ought to devote more attention. In taking our exams, few, if any, of us demonstrated a high level of proficiency in every topic on which we were examined. Learning where we had room to grow helped us focus our efforts and become stronger, more fully developed scientists. A good preliminary exam helps you find identify where you can grow; it also guides the committee as to how we can help you grow efficiently and effectively.

Second, the preliminary exam reinforces the development of skills that you will need in your career. This is no small virtue. The written portion of the exam reinforces your ability to express yourself succinctly, clearly, and forcefully in writing. This ability will serve you in a host of contexts. One obvious context is preparing grant proposals, whether to a large federal research agency or a college committee judging competitive proposals for new teaching equipment. There are many other contexts of course, from preparing manuscripts to writing study guides and laboratory exercises for students. The written portion of the exam, especially when the questions are "open book," also reinforces your ability to find information quickly and

sift it effectively. You appreciate the value of this skill when working on deadline, be it for a grant proposal or for an upcoming class lecture on a subject with which you are not comfortably familiar.

The oral portion of the exam builds your skill at answering questions on the spot. You will be on the spot often no matter where your career path leads. Students ask questions in class, audience members ask questions after a presentation of research, colleagues ask questions as you discuss ideas, and often those questions are not ones that you have anticipated. The ability to answer challenging questions quickly and clearly will make you more effective in every facet of your work.

Third, and finally, the process of preparation, if done well, gives you the opportunity to have conversations with faculty members that go beyond their telling you on which subjects you will be examined. Now don't be mistaken, you do want to use those conversations to learn what each committee member will expect of you. And you certainly want to use those conversations to talk about some of those topics, particularly about facets of them that might be challenging for you. But you can use these conversations for so much more. These are opportunities to learn how each of your committee members thinks about science, from which directions of new research seem most promising to how best to explain a difficult concept to students. These conversations give you the chance to draw on the best of what your committee members have to offer as you develop your own view of science and your own scientific style.

Most importantly, these conversations give you an opportunity to promote your view of science, to tell your committee members where you think the most promising new research directions lay, to advocate your ideas for what you think students in an ecology or animal behavior class (or any class) need to know about the subject. They give you the chance to show your committee members that you are becoming a colleague. Inasmuch as helping you become a colleague is, in the end, the goal of every aspect of graduate training, these conversations are your chance to show your committee that they, and you, are succeeding.