



Ethical considerations in developing the next generation of geoscientists and defining a common cause for the geosciences

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Much of the discussion about ethics in geoscience centers around the ethical use of the science in a societal context or the social and professional conduct between individuals within the geoscience community. Little has been discussed about the challenges and ethical issues associated with the discipline's effort to build its future workforce in light of cyclical hiring, tightening research budgets, and rapidly evolving skill demands for professional geoscientists. Many geoscientists assume that the profession is underappreciated by society and insufficiently visible to students in higher education. Yet, at least in the United States, we are coming out of nearly a decade of record geoscience undergraduate enrollments and graduate programs that are operating at full capacity. During this time we have witnessed several fundamental shifts in the hiring demands for geoscientists, but in aggregate, have not seen any decrease in hiring of new graduates. The formal education system has not been able to respond to rapid changes in the skills required by employers and is producing a proportion of students unprepared to engage in a career as a geoscientist and, in some cases, unaware of the realities of business cycles and the need for professional and geographic mobility. Another problem for the future workforce is the lack of a fundamental rationale for the geosciences. Currently, the geosciences do not have a substantive vision for their role in society that can define the perception and destiny of the geosciences. During the Cold War and the Space Race, for example, advances in geoscience helped shape the next steps by society. Several initiatives, such as Resourcing Future Generations, are proposing research and social context frameworks for the geosciences that address critical global priorities, such as the Sustainable Development Goals. These projects may establish long-term trends and momentum that the discipline can build around. But what is the discipline's, and each of our individual, responsibility towards honest and nurtured development of the next generation, how we recruit future talent and disclose the opportunities and challenges of working in the geosciences, how we construct an educational system that meets the needs of students and society, and what constitutes a common cause for the geosciences?