Editors' Notes

Succeeding generations of college and university faculty are prepared in doctoral programs. Most arts and sciences doctoral students want academic careers (Golde and Dore, 2001), and a majority of those who complete doctoral degrees in the United States find immediate employment or engage in postdoctoral study in U.S. colleges and universities (Hoffer and others, 2006). These new faculty are unlikely to feel adequately prepared for their new jobs. Doctoral students say they learn how to conduct research but not how to publish or secure grants. They are getting practice at running recitation or laboratory sections but not in lecturing, conducting discussions, engaging students in active learning, or advising. Their doctoral programs provide them few opportunities to participate in governance or in community service (Gaff, Pruitt-Logan, and Weibl, 2000; Golde and Dore, 2001). National programs such as Preparing Future Faculty (PFF), the Carnegie Initiative on the Doctorate (CID), the Alliance for Graduate Education and the Professoriate (AGEP), and independent university and department programs are trying to address these deficiencies by preparing doctoral students to be effective teachers, to conduct research with undergraduates or in resource-poor environments, and to be ready to engage in governance (Adams, 2002).

While these reform efforts are well intentioned, to the extent that they focus on research, teaching, and service as separate elements of academic work, many remedies for doctoral education actually preserve what Eugene Rice (1986) labeled the "older academic professional model" that assumes "bifurcation" of teaching and research and may neglect community service altogether. This approach may actually lead to deprofessionalization of faculty work, subdividing it into tasks subject to formal coordination and management by administrators (Rhoades, 1998).

In contrast, an integrated approach to faculty work—and to doctoral education—assumes that faculty are highly qualified, flexible, and complex workers who can handle nonroutine work and see how different aspects of their professional work inform the other various aspects (Scott, 2003). This volume therefore focuses on educating future faculty to integrate their work in two interrelated ways. The first emphasizes synergy among teaching, research, and service roles, thereby encouraging current and future faculty to "enrich their teaching with their research, inform their research with lessons learned from community service, and engage in public scholarship that integrates teaching, research, and service" (Colbeck, 2002, p. 44). The second emphasizes connections between professional and academic aspects of faculty work. The mathematician Hyman Bass, for example, considers his

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field both a *discipline,* with an associated domain of knowledge, methods, and understandings, and a *profession*—"an intellectual community dedicated to knowledge generation, application, conservation, and transmission" interacting with other disciplines, institutions, and society (2006, p. 102). Faculty members who integrate their disciplinary and professional work are adept at recognizing and solving ill-defined problems, skilled at understanding and responding to ethical questions inherent in the various aspects of their work, and able to discover, teach, and apply knowledge with colleagues, students, and community partners in a variety of ways.

We expect this volume to be useful and to provoke discussion among faculty, graduate program directors, and deans charged with stewarding doctoral programs; scholars who study graduate education; and doctoral students themselves. Their interest in improving education for the professoriate is high for several reasons, including new pressures from the globalization of academic work, changing faculty appointments, and a renewed emphasis on the public responsibility of the academy.

Changing Contexts of Academic Work

Academic work is increasingly global—and therefore complex, challenging, and competitive. At the same time, colleges and universities are fragmenting the work of the academy by dividing labor among different professionals and paraprofessionals. While bureaucratic division of labor may enhance the economic competitiveness of individual colleges or universities, it may also reduce their effectiveness in serving the public good.

Universities in the United States prepare American and international students for positions in colleges and universities throughout the world. The international context for educating future faculty as innovative, competitive, skilled professionals fosters a focus on ensuring excellence in the selection, retention, and forward-looking education of doctoral students. A recent report from the Council of Graduate School's Advisory Committee on Graduate Education and American Competitiveness asserts that U.S. graduate education should "ensure that the knowledge creators and innovators of tomorrow have the cultural awareness, skills, and expertise to compete effectively in a knowledge-based economy" (2007, p. 1). Many of the report's recommendations point toward integration of academic work and assert that graduate programs should accomplish the following:

- Urge students to become citizen-scholars who use their knowledge and skills in real-world settings, gaining scholarly experience through service to community, state, nation, and the world (integration of research and community engagement)
- Provide exposure to the array of roles and responsibilities that constitute the professoriate of the twenty-first century (integration of teaching, research, community engagement, and administrative service)

- Reward creativity and risk-taking as key components of a U.S. strategy for innovation (integration of academic skills with professional orientations and values)

The report states that national economic competitiveness depends on a "creative class of knowledge workers who exhibit not just the mastery of a subject area, but the creative ability and drive to reshape the boundaries of knowledge and navigate between geo-cultural boundaries" (p. 5). The Council argues for reforms that make future academic professionals more agile, creative, responsive to the needs of society, collaborative, interdisciplinary, and adept at contributing to the public good.

Reformers may wish future faculty—individually and collectively—to demonstrate creativity, intercultural sensitivity, responsiveness, and innovation, but a "massive makeover" in the academic profession (Schuster and Finkelstein, 2006, p. 54) may inhibit rather than encourage integrated professional approaches to academic work. Nearly two in five full-time instructional staff in U.S. colleges and universities now hold term-limited appointments subject to renewal (Schuster and Finkelstein, 2006). While the trend is to create academic positions focused solely on teaching, research, or outreach, we argue that academic work will be impoverished if most faculty do not have the skills and capacity to make connections across academic and professional roles and responsibilities. Future faculty should be prepared with the skills and desire to find and foster connections between their research, teaching, and service through—or despite—their appointment role assignments.

This role integration is particularly important within a cultural context that is paying ever more attention to professionals' responsibility to serve the public good. William Sullivan (2005) described the social compact made between most professions and the public. In exchange for their autonomy and privilege, professionals will serve society in ways that go beyond economic development. Faculty members who are "professional" in this sense may not abdicate their academic responsibilities for participating in shared institutional governance, for sharing as well as discovering knowledge, for relating knowledge to public issues and to other disciplines, or for mentoring new professionals. The future of the professoriate, at least in the eyes of the public, lies in embracing public responsibilities and viewing academic work through the lenses of the stakeholders they serve, thereby orienting integrated professional work toward public purposes.

Overview of Chapters

The chapters in this volume use several theoretical lenses to improve understanding of the professional identity development process of doctoral students, the current preparation of future faculty, and new ways to educate doctoral students who will be ready to begin their faculty positions as

professionals who integrate teaching, research, and service. Most of the theory-based research on doctoral preparation for faculty careers to date uses socialization theory, which has much to offer those who think about how new graduate students are prepared for academic life. In addition to socialization theory, our authors draw on theories of identity development, professional apprenticeship, mentoring, social networks, situated curriculum, concurrent curricula, and academic planning to illuminate some of the drawbacks of current education for the professoriate and point toward possibilities for improving practice in this area.

The first three chapters feature innovative applications of theory for understanding the possibilities of educating future faculty as integrated professionals. In Chapter One, Carol L. Colbeck draws on professionalization and identity development theories as foundational for viewing academic work as an integrated whole rather than an uneasy amalgam of disjointed research, teaching, and service roles. The silent revolution in faculty appointments (Schuster and Finkelstein, 2006) has already begun to fragment faculty roles into separately appointed teaching, research, or public service positions. Educating doctoral students to embrace the complexity and connectivity of all academic roles may help "reprofessionalize" faculty work for future generations.

Chris M. Golde was at the forefront of one of the best-known efforts to reform doctoral programs at the Carnegie Foundation. In Chapter Two, she considers how a theory of professional apprenticeship derived from preparation of lawyers, doctors, engineers, nurses, and the clergy might inform doctoral education. Building from the work of William Sullivan (Sullivan, 2005), Golde describes three apprenticeships in which doctoral students should engage: an intellectual apprenticeship to gain knowledge of a field, an apprenticeship of skills learned in practice, and a values apprenticeship centered in ethics of the profession.

Socialization theory provides the lens for exploring how to weave the much neglected but increasingly important and relevant faculty role of engaged scholar into doctoral preparation. In Chapter Three, KerryAnn O'Meara considers the knowledge and understandings, skills, and professional orientations (Austin and McDaniels, 2006) that future engaged scholars might acquire during the four stages of socialization of their doctoral experience. O'Meara imagines how graduate programs might attract and orient future faculty toward community engagement through targeted recruitment, funding, mentoring, practice, and curricular structures.

The next two chapters use theory to inform case study research about current doctoral preparation in two specific graduate programs. Chapters Four and Five provide vivid examples of how current practices in doctoral education may foster fragmentation and deprofessionalization of academic work. Their findings are similar, even though one chapter focuses on business and the other on chemistry and the authors use different theoretical frameworks. These chapters draw on lessons learned from the case studies

to offer positive alternatives for educating doctoral students as integrated professionals.

In Chapter Four, Vicki L. Sweitzer explores experiences of doctoral students in a business program ranked among the top fifty in the United States. Sweitzer's conceptual framework combined theories of mentoring, social networks, and professional identity to understand how messages from peers, family, and friends, in addition to advisors and faculty, influenced professional identity development of twelve first-year doctoral students. She found that even at the end of the first semester in their programs, the composition of students' support networks and the nature of the support network partners provided were beginning to shape students' perceptions that professional identity should either be fragmented (focused solely on research) or integrated (incorporating research, teaching, and service).

Chemistry was the site and curricular theories the lens for Emily M. Janke and Carol L. Colbeck's case study of formal professional development training for new doctoral students. Their case study, described in Chapter Five, used theories of the college curriculum as academic plan, concurrent curricula, and the situated curriculum to explore how doctoral preparation shapes graduate students' perceptions of academic work along a continuum from integrated to fragmented. They found that the social and organizational contexts of learning are particularly profound for organizational newcomers such as doctoral students because through interactions, observations, sequencing of tasks, and responsibility assignments, newcomers learn what to know and who to be as a developing professional.

Examples of current efforts to educate doctoral students as integrated professionals are described in the next two chapters. In Chapter Six, Ann E. Austin, Mark R. Connolly, and Carol L. Colbeck describe a project funded by the National Science Foundation called the Center for the Integration of Research, Teaching, and Learning (CIRTL). Scholar-educators from science, technology, engineering, and math (STEM) disciplines have been working together with social scientists at several research universities to develop, implement, and evaluate tools, strategies, and programs to encourage doctoral students to apply their research skills to continuous improvement of their teaching and their students' learning. Here the focus is on preparing professors who integrate their research and teaching.

Integration of professional with academic apprenticeships for doctoral preparation of historians is the focus of Chapter Seven. Eve Levin describes how the University of Kansas history department reformed its doctoral program in association with the Carnegie Initiative of the Doctorate. With very little funding, the department identified strengths and weaknesses in a self-study and then implemented carefully crafted plans to prepare doctoral students as integrated professionals and what the Carnegie Foundation calls "stewards of the discipline," ready for the range of roles and contexts in which they would do their work.

Finally, in Concluding Thoughts, we consider lessons learned from each of the chapters about transforming doctoral education to prepare future faculty as integrated professionals.

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