



# Conceptions of Professionalism in U.S. Research Universities: Evidence from the gradSERU Survey

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**Abstract** Recent scholars of the professions have argued that a new hybrid form of professionalism is becoming dominant. This new form combines traditional commitments to ethics and community service with new commitments to managerial and entrepreneurial objectives. We analyze the perceptions of 4,300 U.S. graduate students in 21 fields concerning how well their programs have prepared them for leadership and management and for ethics and community service. These assessments allow us to examine the prevalence of this new conception of professionalism and to examine it in relation to two other conceptions: the “neo-classical” emphasis on ethics and community service as opposed to leadership and management, and another that emphasizes a divergence between business and technical professions on one side and social and cultural professions on the other. Hybridization was comparatively rare but occurred more frequently among students preparing for management, law, and medicine, and among men and students from more affluent families. We also find some support for the neo-classical thesis insofar as students tended to score higher on the ethics and community measure than on the leadership and management measure. However, the largest number of students took positions consistent with the divergence thesis.

**Keywords** Professionalism · Graduate Students · Socialization · Management · Community

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## Introduction

Graduate level professional training is an important activity of universities. Some 13 percent of Americans (U.S. Census Bureau 2019) – and increasing proportions in other industrialized countries (OECD 2019) – now hold graduate degrees. These people include certified public accountants, architects, computer scientists, educators, engineers, lawyers, medical personnel, public policy specialists, therapists, social workers, and other occupational specializations. In addition to learning fundamental and specialized skills and knowledge relevant to their future work, graduate students preparing for the professions develop understandings of the meaning of professionalism or are reinforced in the understandings they have already developed (see, e.g., Cook et al. 2012; Costello 2005; Sheppard et al. 2008; Sullivan et al. 2008).

In this paper we use novel data from a survey of 4,300 graduate students at five major public research universities in the United States to examine the extent to which contemporary professional programs, in addition to providing occupationally specialized training, are seen by students as promoting two other purported features of professionalism: (1) leadership and management and (2) ethical and community orientations. These two dimensions inform distinctive conceptualizations of the contemporary meaning of professionalism and allow us to begin to adjudicate among them in so far as they are relevant to students' assessments of their socialization experiences in graduate programs.

The study is important because the training graduate students receive and the ethos surrounding this training affects the way professionals understand their work and how they shape their practice (see, e.g., Cook et al. 2012; Costello 2005; Everitt 2018). The traditional conception of professions and professionalism is that professionals stand at arm's length from bureaucratic management and corporate priorities because they use their acquired knowledge to serve broader social and cultural purposes and they do so with ethical codes in mind. If interests in leadership and management are becoming dominant in the professions, this traditional conception is, by definition, in the process of being undermined – and presumably to the benefit of organizations rather than clients or the broader community. If these traditional purposes remain dominant in the preparation of students for the professions, however, concerns about the absorption of professionals into the cultural framework of bureaucratic management and corporate profit-seeking are at the very least not evident in the graduate training of students in this sample.

The three conceptualizations of professionalism we consider are as follows: (1) The *neo-classical thesis*. This idea posits that professions stand at arm's length from the profit-seeking market interests of management and are defined instead by their specialized expertise, their client and community serving orientations, their ethical commitments, and their regulations against malpractice (see, e.g., Tawney 1948). (2) The *divergence thesis*. This thesis argues that the professions are now divided between a dominant stratum of market-oriented "expert" professions and a subordinate stratum of "socially-oriented" professions. According to

this thesis, the former are comfortable with business and management priorities, while only the latter retain a broader, value-based community orientation and an arm's length stance in relation to business and management (see, e.g., Brint 1994). (3) The *hybridization thesis*. This thesis argues that the professions are now composed of a fusion of elements once considered antithetical. These elements include an embrace of *both* market-oriented business and managerial orientations *and* socially-oriented ethical and community considerations (see, e.g., Noordegraaf 2007). Each of these conceptualizations assumes that claims to and demonstrations of occupationally specialized knowledge are a universal element of professionalism. We make the same assumption and do not investigate the transmission of occupationally specialized knowledge in graduate professional programs.

We note that these three conceptualizations do not encompass all of the characteristics that social and behavioral scientists have associated with professionalism. For example, they do not address interpersonal capacities to lend a sympathetic ear while maintaining an objective distance or to use a combination of knowledge, experience, and judgment to make decisions as practitioners (Schoen 1983). They do, however, encompass the critical *relational* dimensions that are at the heart of contemporary debates – i.e. (1) closeness to/distance from business and management and (2) closeness to/distance from ethical and community service concerns.

The idea that the socialization experiences of young adults are influenced by broader trends in culture and society is a long-standing theme in sociology (see, e.g., Gerth and Wright Mills 1953) and in educational sociology (see, e.g., Powell et al. 1985). (For an overview of recent research, see Guhin et al. 2021.) However, the relationship between graduate school socialization experiences and evolving conceptions of professionalism has been explored mainly by historians of earlier eras of professionalization (see, e.g., Bledstein 1976; Perkin 1969; Wiebe.1967). We contribute to this literature by using contemporary survey data to explore evolving contemporary conceptions of professionalism. As far as we know, ours is the first analysis to investigate how students perceive the programmatic emphases found in graduate programs as they relate to competing conceptions of professionalism.

Our research questions are as follows:

1. To what extent do each of the three conceptions of professionalism accurately describe central tendencies in the socialization experiences of aspiring professionals?
2. To what extent are students in particular professional fields aligned with each of the three conceptions of professionalism?
3. To what extent are students in particular demographic groups aligned with each of the three conceptions of professionalism?
4. To what extent are high scores on the leadership/management dimension associated with high scores on the community/ethics dimension of professionalism and vice versa?

We analyze responses from the professional development module of the 2017 and 2018 gradSERU surveys.<sup>1</sup> These questions ask students to rate how well their program has prepared them for leadership, entrepreneurship, and management skills, on the one hand, and for ethical behavior, integrity, respect for cultural diversity, and community values, on the other. The data consequently allow for the first investigation of the extent to which professional programs are as perceived by students consistent in upholding values distinct from business and management, as emphasized in the neo-classical ideal; are diverging in their emphases between business-oriented and community-oriented values; or are fusing ethical and community-serving elements of the neo-classical model with the business-and organization-oriented priorities of management, as argued by proponents of the hybridization thesis.

### *The U.S. Context of Professional Education*

The meaning of the terms “profession” and “professional” are contested. Trait theorists argue that professions share characteristics that make them distinctive in relation to other occupations. These include: high levels of formal education; work that requires non-routine expertise and judgment; significant levels of autonomy at work as a result of these requirements for expertise and judgment; a normative orientation to client service that goes beyond a purely pecuniary orientation; high levels of occupational control of admissions and qualifications; codes of ethics and enforcement mechanisms under occupational control; and status in society as a result of these characteristics. (For a review, see Saks 2021). At the opposite extreme, some argue that the term is best understood as a “folk concept” employed by occupational groups in their efforts to gain and maintain status in society through the creation of valuable market shelters protected by educational, and in many cases also licensing requirements (see, e.g., Bourdieu and Wacquant 1992; Freidson 1985).

Studies of the professions indicate that some of the traits early theorists identified with professional work have eroded, to a greater or lesser degree, under corporate and third-party bureaucratic control or under the impress of market competition. These include, notably, high levels of autonomy at work (Adler et al. 2008; Rothman 1984) and a normative orientation to client service (Heinz and Laumann 1982; Staff 1982). Other theorized traits are not distinctive only of professional work, though they frequently also inhere in professional work. These include high levels of occupational control of admissions and qualifications, long shared by many of the skilled trades (Millerson 1964), and codes of ethics, which have become adopted in a wide variety of non-professional occupations (Alexandra and Miller 2010). The only characteristics that remain entirely distinctive of professional occupations are high levels of formal education, the skills that derive from this education, and work that comparatively frequently requires non-routine problem-solving and judgment (Schoen 1983). Professionals’ status in society results from these characteristics, as well as

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<sup>1</sup> Question wording changed in the most recent gradSERU survey so that questions on leadership and management were phrased differently than those on ethics and community. We therefore could not incorporate data from the 2019 or 2020 surveys.

from the higher incomes that often accompany them due to the strength of markets for specialized and qualified mental labor and the market shelters professionals are often able to erect to limit supply (Weeden 2002).<sup>2</sup>

For the purposes of this paper, it is important also to situate U.S. professional occupations in their cultural context. Sociologists of the professions have traditionally made a distinction between the more market-oriented Anglo-American model of professions and the more state-centric continental European model (Burrage 1990). In the United States, and to a somewhat lesser extent in England, the means to create a distinctive protected status and elevated lifestyle laid primarily in political activity on the part of occupational associations that sought to organize members identified with the occupation. These occupational associations negotiated with the state for the official support of market shelters for the occupation (Freidson 1985: 35; see also Wilensky 1964). Market shelters were strong in some cases, bolstered by both educational and licensing qualifications, and weak in others. Competition for jurisdictional priority has consequently occurred regularly; it has been mounted by rival occupations through the promotion of new educational programs, jockeying in the market for consumers of professional services, and through lobbying the state for protections from competition based on specific competencies and ethical standards (Abbott 1988).

The Anglo-American model of professionalization varied from the pattern found in continental European and in East Asian nations with more centralized governments. These governments took considerably more initiative in shaping occupational market shelters. Moreover, on the Continent, primary identity has been influenced more by the status and connections gained by elite education and less by the occupational specialty itself (Freidson 1985). Employment conditions – whether one was in private practice or salaried – also superseded occupation as an influence on identities (Ben-David 1977). For these reasons the particular occupational field studied has influenced identities in the United States, as well as in other Anglo-American countries, to a greater degree than in comparable European and East Asian societies (see also Karpik 1999).<sup>3</sup>

### Three Conceptions of Professionalism

In this section we discuss in greater detail the three conceptualizations of the meaning of contemporary professionalism that we consider.

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<sup>2</sup> In recognition of the pivotal role of graduate degrees in the modern professions, some social scientists now prefer the term “knowledge-based occupations” (see, e.g., Gorman and Standefur 2011). Because we are interested in how students preparing for these occupations think about their preparation as it relates to rival conceptions of professionalism, we use the traditional term “professional,” recognizing that the defining characteristics of professional occupations can and do change over time.

<sup>3</sup> Over the last decade some sociologists of the professions have argued for a convergence between the Anglo-American and Continental models created by an increasing reliance on market competition in Europe, promoted by advocates of the “new public management” and transnational actors (Evetts 2012). The extent and dimensions of convergence, however, remain open empirical questions.

*The Neo-Classical Thesis*

The original high-status fee-for-service professions of medicine and law presented themselves as using specialized expertise to serve their clients' interests. They explicitly excluded narrow pecuniary concerns as defining features of their professions. Instead, they emphasized trust relationships and service oriented to the well-being of clients (Elliott 1972; Larson 1979; Reader 1966). They developed training and licensing programs to create standards for learning and practice. They policed themselves by excluding those who could not pass licensing exams and further by requiring adherence to ethics statements and to the judgment of professional bodies used to root out malpractice. They claimed autonomy on the basis of their trained expertise and their ethics, and, with the support of the state, they imposed market monopolies through their credentialing and licensing requirements (see, e.g., Larson 1979). Initially, fee-for-service professionals were men who usually came from socially advantaged families. They frequently accumulated high incomes from their professional practices, but they insisted that their occupation existed to serve their clients and not their own self-interests (Reader 1966).

In the early twentieth century, many more professionals began working as salaried employees in large organizations rather than in private practice. Even so, the claim to serve clients' interests remained as a central feature of professionalism through the early twentieth century and, importantly, it was also generalized beyond clients as service to society. Thus, the original fee-for-service ideals were abstracted to fit the circumstances of a society increasingly conscious of occupational functions. Because of this generalization of professional service as a contribution to the larger society we describe this as a "neo-classical" rather than as the "classical" ideology of professionalism. This abstracted version of the classical idea of professionalism found expression in the works of early and mid-twentieth century advocates and analysts. As R.H. Tawney (1948: 94–95) wrote:

Professionals may, as in the case of the successful doctor, grow rich; but the meaning of their profession, both for themselves and for the public, is not that they make money, but that they make health, or safety, or knowledge, or good government, or good law...[Professions uphold] as the criterion of success the end for which the profession, whatever it may be, is carried on, and [subordinate] the inclination, appetites, and ambition of individuals to the rules of an organization which has as its object to promote the performance of function.

These functions, for Tawney and for many other mid-twentieth century analysts of the professions, were activities that embodied and expressed the idea of larger social purposes (see also Carr-Saunders and Wilson 1933; Marshall 1950; Parsons 1939). Mid-century trait theories of the professions mirrored Tawney's emphasis on specialized expertise, lengthy formal instruction, performance of an important social function, and ethical commitments – an occupational complex leading to comparatively high salaries, high social status, and high levels of autonomy at work. A contrast with the more purely pecuniary interests of business people is especially evident in this work (see, e.g., Carr-Saunders and Wilson 1933; Goode 1957; Greenwood 1957; Parsons 1939). Merton et al. (1957) published an early ethnographic

study grounded in the neo-classical view of professions. Everitt's (2018) study of socialization in a university-based education program is characteristic of contemporary ethnographies that show aspiring professionals working to maintain a client-centered approach consistent with the neo-classical thesis.

### *The Divergence Thesis*

Brint (1994) argued that the coherence of the professional stratum was never as strong as the neo-classical and trait theorists argued, and that it broke down completely during the course of the twentieth century. Some salaried professionals, such as chemists and engineers, were embedded within large for-profit corporations by the late nineteenth century and most accepted managerial priorities and the profit motive from the beginning (see also Brint and Levy 1999; Zussman 1985). These occupations were not much examined by theorists of the professions and professionalism. Instead, the focus tended to be on the fee-for-service professions of medicine and law where the neo-classical ideal tended at first to be stronger.

By the middle of the twentieth century, Brint argued, two divergent conceptions of professionalism were embraced in different segments of the professional stratum. The first, which he termed "expert professionalism," was characteristic of professionals whose work was conducted mainly within large organizations in the private sector. These professionals emphasized specialized expertise and downplayed service to society in favor of service to their organizations. They expressed relatively little discomfort with market logic or managerial controls. A wide range of occupations fit the description of "expert professionals," including certified public accountants, chemists, engineers, management consultants, corporate lawyers, and also managers who took professional degrees. He described the second form of professionalism as "social trustee professionalism." This second version of professionalism, he argued, was dominant during the early twentieth century Progressive period in the U.S. and helped to unify the professional stratum at that time. As "expert professionalism" grew in importance, however, "social-trustee professionalism" became associated primarily with professionals located in the public and non-profit sectors, with arts and media professionals, and with human services professionals such as social workers and schoolteachers. Social trustee professionalism thus became an ideology associated mainly with the subordinate as opposed to the dominant stratum of professionals. It became a claim for distinction that compensated for a relative decline in status. The members of these occupational groups retained the original arm's length attitude toward business and management and continued to represent themselves as serving broader social purposes. Among the professions maintaining the traditions of "social-trustee professionalism," were artists, writers, educators, journalists, public policy analysts, urban planners, and social workers.

Brint (1984, 1994) supported the divergence thesis by examining the distribution of political attitudes and identifications of professionals by occupational category, income level, and sector. Brint and Levy (1999) found patterns of variation largely consistent with the divergence thesis in the speeches of leaders of technical-scientific as opposed to socio-cultural professional associations during the period 1870–1970.



Further support for the thesis can be found in ethnographic studies showing patterns of socialization consistent with the divergence thesis, as in the work comparing the socialization of lawyers and social workers (Costello 2005), doctors and nurses (Larsson and Hall-Lord 1993), doctors and medical social workers (Mizrahi and Abramson 1985), and doctoral students in the “hard” (or quantitative) as opposed to the “soft” (or interpretive) academic disciplines (Becher 1989; Clark 1987).

### *The Hybridization Thesis*

Recent discussions of professionalism have focused on the extent to which managerial responsibilities and values have become embedded in professional practice as a result of changing work responsibilities and neo-liberal and “new public management” ideologies (Noordegraaf 2007, 2015). It has been well-known for some time that a majority of professionals have managerial responsibilities of one type or another (Freidson 1985: chap. 3; see also Zussman 1985). These responsibilities include office planning, mentoring associates, and supervising assistants. Even those who do not have formal managerial responsibilities are now often expected to incorporate managerial priorities into their work practice. This is true of public as well as private sector professionals. Considerations of revenue, cost, efficiency, consumer demands and organizational priorities have become embedded in professional practice (see, e.g., Exworthy and Halford 1999; Scott et al. 2000; Scott 2008). Conversely, a sizable proportion of managers claim to incorporate professional expertise into their work (Grey 1997; Hallett and Gougherty 2016; Hodgson 2005; Mintzberg 2004). Moreover, financial services providers and management consultants have adopted professional ethics and formal qualifications, potentially accelerating the fusion of professionals with management (Mintzberg 2004; Hodgson 2005).

The hybrid form of professionalism can be defined by at least a deference to – and more often an embrace of – managerial priorities together with a continued emphasis on specialized expertise, formal qualifications, and commitment to high ethical standards and broader social purposes. It is thus a fusion of elements drawn from the neo-classical ideal of professions mixed with the newer managerial orientations (Faulconbridge and Muzio 2008). Schlee’s (2006) study of socialization in business and law schools provides evidence for a hybrid form of professional socialization in these programs. The distinctive feature of this conception is that it is thought to be developing a strong presence in all professional occupations, even if its center of gravity is located in managerial and business services professions (Faulconbridge and Muzio 2008; Noordegraaf 2007, 2015).<sup>4</sup>

<sup>4</sup> For Noordegraaf (2007), this fusion of managerial and community orientations exists mainly at the level of ideological assertion. Neither managers nor professionals are able to make good on all claims for autonomy and authority at work because all are subject to higher level managerial controls and protocols, but claims to professional expertise and broader community service and ethical principles create opportunities for successful *situational* expansion of claims for autonomy and authority. Thus, professionals’ successful claims to autonomy and authority have become dependent on persuasion through “continuous interpretation and meaning construction” (p. 774).



**Table 1** Three conceptualizations of professionalism

| Professionalism concept | Exemplary author   | Advanced degrees/trained expertise | Orientation to social purposes                                   | Orientation to managerial purposes                               |
|-------------------------|--------------------|------------------------------------|--|--|
| “Neo-classical”         | Tawney (1948)      | Yes                                | Yes  | No   |
| Divergence              | Brint (1994)       | Yes                                | Varies (mainly in socio-cultural and human services professions) | Varies (mainly in business and scientific-technical professions) |
| Hybrid                  | Noordegraaf (2007) | Yes                                | Yes  | Yes  |

We provide an overview of these three conceptualizations of professionalism in Table 1.

## Data and Methods

### *Sample*

The gradSERU survey is the first U.S.-based survey to investigate the educational experience of graduate and professional students using standard questions across multiple research university campuses. The survey includes questions on a wide variety of topics, including mentoring, financial aid, physical and mental health issues, time use, and skill development. Our data is drawn from the more than 4,300 respondents at five major public research university campuses who responded to questions in both the core and the professional development modules of the survey.<sup>5</sup>

The universities included in the study are not fully representative of the universities offering graduate training for professional occupations.<sup>6</sup> The gradSERU sample

<sup>5</sup> The gradSERU survey was fielded at seven universities in 2017 and 2018. We dropped all responses from two of the universities. The administrators at these two universities were unable to ask respondents for their race or ethnicity, an important variable in the U.S. context. This elimination left us with a sample of approximately 4700. In the five retained universities we also dropped cases where race was missing because it is not possible to impute race from these data. We also dropped international students at the retained universities because of inconsistencies in the coding of international students.

<sup>6</sup> In the United States, training for the professions is concentrated at the approximately 200 research universities (Carnegie Classifications 2020). Not all research universities provide training in all professional fields. Business, engineering, and education programs are widespread, but programs with lower labor market demand are relatively scarce. Only a few dozen universities offer graduate programs in architecture or social work. Training programs for professional programs in business, medicine, and law are also offered at free-standing schools and at universities that are not categorized as research universities. Some 85 of nearly 120 graduate schools of business are located at universities classified by Carnegie as research universities; the rest are offered at free-standing business schools and campuses that are not classified as research universities. Similarly, slightly over 100 research universities operate one of the 155 currently accredited medical schools, and fewer than half of the country’s 200 law schools are located at research universities.

includes no private universities. In addition, the sample is drawn from public universities located exclusively in the eastern and middle western states. Three of the five universities are members of the prestigious Association of American Universities (AAU), representing an elected group of 62 leading research universities. Two of the AAU member institutions have very large enrollments (over 50,000), and all three of the AAU member institutions have larger enrollments than the two non-member institutions in the sample. Each of the institutions offers a wide range of professional and graduate programs, including representation in the 21 fields analyzed in this paper.

The relatively small number of universities included in the study is a limitation, but this limitation is offset by the unique relevance of the dataset to our research questions. The results of the analyses should be of significant interest to scholars of the professions and higher education in so far as they represent the first investigation of an important question – namely, how do today’s graduate and professional students conceive of their relationship to leadership and management, on the one hand, and community service and ethics, on the other. Moreover, the sample population is sizable, and the universities do not vary greatly from one another in the distribution of student responses. This suggests that patterns of student response may be relatively consistent across a larger and more broadly representative set of universities.

### *Survey Questions*

We analyze responses to 15 questions drawn from the professional development module of the survey. These questions address students’ assessment of how well their programs have prepared them with regard to training of (1) leadership and entrepreneurial skills, (2) people and project management skills, (3) conflict resolution skills, (4) ethical behavior, and (5) valuing community perspectives. Each one of these five broad categories includes three questions related to facets of the construct. Thus, for example, the following questions were asked in the broad category people and project management skills: “How well has your program prepared you for each of the following: (1) leading and collaborating with a wide range of individuals and teams, (2) supervising individuals with a wide range of experiences and backgrounds, and (3) completing projects successfully and on time.” Response categories for each question are: “not at all well,” “slightly well,” “well,” “very well,” and “extremely well.”

Logically, a high level of correspondence would be expected between student assessments of the training they have received and actual programmatic emphases; it is unlikely that programs that pay little attention to leadership and management skills will be assessed as providing strong training in these areas. Similarly, it is unlikely that programs that pay little attention to ethical behavior or community perspectives will be assessed as providing strong training in these areas. In this respect, students’ assessments of their preparation in the domains of leadership/management and ethics/community should reflect the conceptions of professionalism embedded in their programs.

We cannot, however, expect a perfect correspondence between student assessments and programmatic emphases, because these assessments can also vary by students' initial expectations or by characteristics that lead different students to engage with aspects of their programs that contribute to the values and skills in which they are interested. Students who expect more from their programs in a particular area may find the training provided insufficient. Students who expect little, by contrast, may be inclined to evaluate the training as more than sufficient. Moreover, students' perceptions of what their programs emphasize matter and may reflect, at least in part, what they personally value in the preparation they have received.

These issues raise potential threats to validity. However, the phrasing of the questions gives us confidence that student responses are not, in general, artifacts of their initial expectations or their personal interests. Each of the questions puts an explicit emphasis on the content of the curriculum and what the program itself has provided in preparing students for professional life. The pattern of responses across fields is generally consistent with the findings of ethnographic studies of socialization in different professional fields. Moreover, as noted below, we control for a number of variables that could influence students' socialization experiences, including their social class, race-ethnicity, gender, year in program, and university attended. Nevertheless, because we cannot be certain about how initial expectations influence students' assessments of programmatic emphases or how personal curricular interests may matter, we exercise caution in the interpretation of the results of the analyses.

### *Outcome Variables*

The outcome variables in the study are based on cluster and principal components analyses. Cluster analysis provides information on the configurations of scores across multiple measures in a sample. Principal components analysis yields the main dimensions of students' professionalization experiences.

For the cluster analysis, we entered the 15 items into the k-means clustering algorithm. In these analyses, the items on leadership/management tended to co-vary, as did the items on ethics/community. The clusters, which are discussed in detail below, consisted of individuals scoring high on both leadership/management and ethics/community; low on both; and high on one but low on the other.

We included each of the 15 items in a principal components analysis. We performed a promax rotation and then calculated a weighted component score for each observation. Each of the questions on leadership, management, and conflict resolution factored on to a first principal component. Each of the questions on ethical behavior and valuing community factored on to a second principal component. We used these components as the outcome variables in regression analyses. The questions included in the leadership/management and ethics/community components are summarized in Table 2, together with statistics derived from the principal components analysis.<sup>7</sup>

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<sup>7</sup> All scores on each of the components are above the acceptable level of 0.3 (Hair et al. 2018). Cronbach's alpha for the leadership/management and the ethics/community components were 0.96 and 0.97, respectively.

**Table 2** Two dimensions of professionalism derived from principal components analysis

| Construct                    | Questions  | Weight |
|------------------------------|--|--------|
|                              | How well has your current training prepared you for:   |        |
| <i>Leadership/management</i> | 1. Leading, influencing, and inspiring                 | .363   |
|                              | 2. Taking risks  | .352   |
|                              | 3. Contributing to professional communities            | .332   |
|                              | 4. Collaborating w/wide range of individuals and teams | .345   |
|                              | 5. Supervising individuals                             | .359   |
|                              | 6. Completing projects successfully and on time        | .268   |
|                              | 7. Advocating for self and others                      | .316   |
|                              | 8. Engaging in difficult conversations                 | .308   |
|                              | 9. Moving a group from discord to shared goals         | .331   |
| <i>Ethics/community</i>      | 1. Conduct with high level of integrity                | .359   |
|                              | 2. Making ethical and fair decisions                   | .375   |
|                              | 3. Treating others fairly and equitably                | .404   |
|                              | 4. Respecting differing opinions and backgrounds       | .434   |
|                              | 5. Recognizing a wide range of cultural perspectives   | .435   |
|                              | 6. Promoting inclusion, belonging, and community       | .422   |

Source gradSERU 2017–2018

### *Covariates*

The divergence thesis predicts a division in conceptions of professionalism associated with professions close to and distant from the power centers of the American economy. We classify the following programs as training students for positions in the stratum of business and technical professions close to the power centers of the American economy: (1) business/management, (2) law, (3) engineering/architecture, (4) computer science, (5) medicine, and (6) other health professions (including dentistry and veterinary medicine). We note that the business, law, and medical professions have been the predominant focus of those advocating the hybridization thesis (Falcounbridge and Muzio 2008; Noordegraaf 2007), while business management was excluded from the original considerations of the divergence thesis (Brint 1994). We classify the following programs as training students for positions in the stratum of cultural, civic, and human services professions distant from the power centers of the American economy: (1) arts, (2) journalism/communication, (3) public policy/public administration, (4) nursing, (5) psychological counseling, (6) education, (7) social work. We refer to the basic arts and sciences fields as “academic professions” because of their focus on research and teaching. They include: (1) mathematics/statistics, (2) physical sciences, (3) life sciences, (4) economics/political science, (5) psychology, (6) anthropology/sociology, (7) history, and (8) literature

and languages.<sup>8</sup> We include doctoral students in the analysis for the following reasons: academic positions fit our definition of professions, which focuses on graduate education; and changes in the labor market have led half or more of recent doctoral students in the United States to pursue positions outside of academe (Langin 2019). We use agricultural/environmental sciences as our reference category in regressions because it is poised between the dominant and subordinate strata of professional training programs and includes both professional and academic programs.<sup>9</sup>

We include in our regressions three demographic variables as controls: (1) self-identified social class of family of origin, (2) race/ethnicity, and (3) gender. The three are fundamental categories associated with social inequality in the U.S. We divide social class into four categories based on student self-reports of their social class when they were growing up: (1) poor/lower-class, (2) working-class, (3) middle class, and (4) upper-middle class/wealthy. We include wealthy with upper-middle class because of the small number of individuals who categorized themselves as coming from wealthy families. We use middle-class as the reference category. We dichotomize gender and code race/ethnicity into five categories: African-American, Asian/Asian American, Hispanic, White, and Other Underrepresented Minorities (Other URM). The other URM category includes Native Americans, Pacific Islanders and those of mixed race. We treat men as the reference category for gender and whites as the reference category for race/ethnicity. We also control for year in program (first, second, third or more) under the assumption that first-year students may tend to be more idealistic than those closer to the labor market (see, e.g., Granfield and Koenig 1992). Finally, we control for university attended in a manner similar to adding university fixed-effects, masking the names of the universities as required by gradSERU confidentiality agreements.

In the regressions, we also account for the possibility that unmeasured social psychological influences and/or track effects within programs may lead students who score high on leadership/management to score high also on ethics/community net of their fields of study and socio-demographic characteristics. To do so, we enter component scores for ethics/community into regressions on leadership/management and component scores for leadership/management into regressions on ethics/community.

Descriptive statistics for covariates are provided in Table 3.

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<sup>8</sup> Small Ns for some professional fields required that we either combine or eliminate the fields. We did so in the case of fields with one percent or fewer of respondents. The combination of the small field of statistics with mathematics and the combination of the small field of anthropology with sociology are justified by the close alignment of domains. In less obvious cases, we searched for the nearest neighbor. We considered economics the nearest neighbor to political science because both focus on institutional arenas, cite each other's work relatively frequently, and because political scientists have been more likely than other social scientists to adopt quickly to methodological developments in economics (see, e.g., Brint 2017). Architecture is simultaneously an engineering and an arts discipline. In practice, and varying by the specific institutional location, architecture programs also include elements of graphic design, planning, psychology, public policy, and social science (Piotrowski and Robinson 2000). Again results do not change when architecture is categorized as an arts discipline rather than an engineering discipline nor when it is dropped from the analysis. We eliminated the small field of parks, recreation, fitness, and leisure because we could not find a near neighboring field.

<sup>9</sup> Fields, such as business, law, and nursing very few or no doctoral students. Others, such as anthropology/sociology and literatures/languages, included very few master's students. Adding degree level as a control variable would therefore have compromised our capacity to measure field-level variation.

**Table 3** Descriptive statistics for covariates

| Variable                            | Percent (%) | N    |
|-------------------------------------|-------------|------|
| <i>Fields</i>                       |             |      |
| Business/Management/Accounting      | 8.0         | 346  |
| Law                                 | 1.1         | 47   |
| Medicine                            | 2.7         | 117  |
| Engineering/Architecture            | 9.8         | 423  |
| Computer Science                    | 4.5         | 194  |
| Public Policy/Public Administration | 4.7         | 202  |
| Nursing                             | 3.6         | 157  |
| Allied Health Professions           | 7.5         | 322  |
| Communications/Journalism           | 1.3         | 56   |
| Education                           | 9.9         | 427  |
| Social Work                         | 5.1         | 218  |
| Mathematics/Statistics              | 1.4         | 59   |
| Physical Sciences                   | 4.9         | 213  |
| Life/Biosciences                    | 11.6        | 501  |
| Environmental/Agricultural Sciences | 5.9         | 254  |
| Economics/Political Science         | 2.9         | 123  |
| Psychology                          | 5.4         | 233  |
| Sociology/Anthropology              | 2.7         | 116  |
| Literatures/Languages               | 3.2         | 137  |
| History                             | 1.8         | 76   |
| Arts                                | 2.1         | 89   |
| <i>Gender</i>                       |             |      |
| Male                                | 37.5        | 1618 |
| Female                              | 62.5        | 2692 |
| <i>Race-Ethnicity</i>               |             |      |
| African-American/Black              | 4.8         | 206  |
| Asian-American                      | 15.5        | 666  |
| Hispanic/Latino                     | 4.9         | 211  |
| White                               | 72.8        | 3138 |
| Other                               | 2.1         | 89   |
| <i>Self-Identified Social Class</i> |             |      |
| Low-income/Poor                     | 7.2         | 332  |
| Working Class                       | 22.6        | 972  |
| Middle Class                        | 44.2        | 1906 |
| Upper-middle/Upper Class            | 26.0        | 1120 |
| <i>Year in Program</i>              |             |      |
| First                               | 13.7        | 590  |
| Second                              | 34.4        | 1484 |
| Third or Above                      | 51.9        | 2236 |

## Analyses

*Cluster Analysis* K-means clustering<sup>10</sup> is an iterative algorithm that partitions the dataset into  $K$  distinct non-overlapping subgroups (clusters) where each data point belongs to only one group. It is designed to make the intra-cluster data points as similar as possible while keeping the clusters as different as possible from one another. It assigns data points to a cluster so that the sum of the squared distance between the data points and the cluster's centroid (the arithmetic mean of all the data points that belong to that cluster) is at the minimum. The less variation within clusters, the more similar the data points are within the cluster (MacQueen 1967). Because the response categories for all items were on the same scale, the data required no standardization prior to clustering.

To choose the optimal number of clusters, we followed Makles's (2012) procedures. We first performed 20 different clustering runs, each one from a different random starting point in the data array. Each of these runs produced 20 different solutions, with clusters as small as one and as large as 20, for a total of 400 solutions. With these 400 solutions as our analysis base, we generated three test statistics to choose the optimal number and composition of clusters. These are within sum of squares (WSS), its logarithm, and the  $\eta^2$  coefficient which is similar to  $R^2$ . After generating these measures, we used scree plots to identify the last value of  $K$  before the slope of the plot leveled off.<sup>11</sup> We found no consistently clear basis for choosing among four and five-cluster solutions. However, five-cluster solutions were less interpretable and less well aligned with our theoretical interests. We have therefore chosen to focus on four sizable, interpretable, and theoretically relevant clusters. Among the four-cluster solutions, we picked the one with the strongest test statistics.

*Regression Analyses* The regression analyses are based on the component scores obtained from the principal components analysis. In the regressions we first entered field dummies on the leadership/ management and ethics/community scales. We then entered the socio-demographic and other control variables as a second block. We entered the relevant component score in the third block. Thus, the form of the saturated regression model is as follows:

$$y_i = \beta_0 + \beta_1 F_i + \beta_2 C_i + \beta_3 RC_i + \varepsilon_i$$

where  $y_i$  represents the weighted component score for individual  $i$ ;  $F_i$  represents the vector of field dummy variables;  $C_i$  represents the vector of control variables and  $RC_i$  represents the vector of the relevant component score. We use robust standard errors to account for heteroscedasticity.

<sup>10</sup> As an alternative, we also employed latent class analysis (LCA) to classify our items. The choice between these two approaches depends on assumptions about the underlying structure of the data and the objectives of the study (see, e.g. Eshgi et al. 2011). Since we used regression modeling in conjunction with principal components analysis in the paper, a model-based approach seemed less apt to us than an entirely unsupervised approach to classification. The optimal K-means solution also proved to be theoretically more interpretable than the LCA solution.

<sup>11</sup> These diagnostic analyses are available on request.



## Results

### *Cluster Analysis*

We present the results of the K-means cluster analysis in Table 4. The proportions included in each of the four clusters are comparable, ranging between 24 to 27% of the sample. As Table 4 shows, respondents tended to score significantly higher (at  $p < .001$ ) on the ethics and community items than on the leadership and management items, a finding consistent with the neo-classical model.

The members of Cluster 1, which comprises 24% of the sample, stood out for their relatively high scores on both the leadership and management items and the ethics and community items. We label it “High L-M/High E-C” in Table 4, where L-M refers to leadership/management and E-C refers to ethics/community. The largest of the clusters, Cluster 2, included 27% of the respondents. It can be described as a cluster whose members tended to score lower on the leadership and management items and higher on the ethics and community items than respondents in the sample as a whole. We label it “Low L-M/ High E-C.” Cluster 3, comprising 24% of the sample, includes members who scored low on both the leadership and management items and the ethics and community items. We label it “Low L-M/Low E-C.” Finally, Cluster 4, comprising 25% of the sample, is characterized by members who score somewhat higher on leadership and management items and somewhat lower on the ethics and community items than respondents in the sample as a whole.

These findings are consistent with the divergence thesis in so far as a majority of respondents were located in either the High L-M/Low E-C cluster or the Low L-M/High E-C cluster. By contrast, the High L-M/High E-C cluster, which would be predominant if the hybridization thesis described the central tendencies in the sample, encompassed a smaller proportion of respondents, slightly less than one-quarter of the total. The Low L-M/Low E-C cluster, another quarter of the sample, fit none of the three conceptions of professionalism we consider. As such, this cluster could be interpreted as a “de-professionalized” segment – and certainly the individuals in this segment show a kind of normlessness with respect to both dimensions of professionalism we investigate. However, as we will show below, this cluster is composed primarily of students in the foundational arts and sciences disciplines, suggesting that the interests of many may lie with research and intellectual life rather than with either the management-serving or community-serving purposes of professionalism.

In Table 5, we provide a representation of the distribution of fields across clusters. In some cases, students studying a given field are disproportionately represented in more than one cluster. Such findings indicate that students in these fields were divided in their dominant orientations. We found statistically significant over-representations of students in business and law in the High L-M /High E-C cluster. We also found students in health professions and public policy to be over-represented in this cluster, although not by statistically significant margins. (By over-representation here and in later references, we mean simply a higher proportion than would be expected by random.) Here we find partial support for the hybridization thesis. We characterize the support as partial because most professional fields were *not*

**Table 4** K-means clustering results

**A. Total Sample**

| Variable                   | Observations | Mean Score | St. Dev. |
|----------------------------|--------------|------------|----------|
| 1: Leading/Inspiring       | 4540         | 2.68       | 1.10     |
| 2: Taking Risks            | 4528         | 2.73       | 1.10     |
| 3: Prof. Contributions     | 4534         | 2.79       | 1.09     |
| 4: Collaborating w/ Others | 4538         | 2.86       | 1.10     |
| 5: Supervising             | 4528         | 2.66       | 1.16     |
| 6: Completing Projects     | 4536         | 3.08       | 1.07     |
| 7: Advocating              | 4556         | 2.83       | 1.11     |
| 8: Difficult Conversations | 4553         | 2.80       | 1.12     |
| 9: Moving to Shared Goals  | 4544         | 2.63       | 1.12     |
| 10: Integrity in Conduct   | 4578         | 3.54       | 1.01     |
| 11: Ethical Decisions      | 4570         | 3.54       | 1.01     |
| 12: Fair Treatment         | 4570         | 3.61       | 1.03     |
| 13: Respect Differences    | 4560         | 3.61       | 1.05     |
| 14: Cultural Recognition   | 4559         | 3.62       | 1.06     |
| 15: Promoting Community    | 4553         | 3.58       | 1.08     |

**B. Four Clusters**

**Cluster 1: High L-M/High E-C (24%)**

**Cluster 2: Low L-M/High E-C (27%)**

| Variable                   | Obs. | Mean | St. Dev. |  | Obs. | Mean | St. Dev. |
|----------------------------|------|------|----------|--|------|------|----------|
| 1: Leading/Inspiring       | 1046 | 3.97 | 0.75     |  | 1183 | 2.48 | 0.79     |
| 2: Taking Risks            | 1046 | 3.99 | 0.73     |  | 1183 | 2.55 | 0.82     |
| 3: Prof. Contributions     | 1046 | 4.01 | 0.73     |  | 1183 | 2.66 | 0.83     |
| 4: Collaborating           | 1046 | 4.14 | 0.67     |  | 1183 | 2.71 | 0.82     |
| 5: Supervising             | 1046 | 3.98 | 0.79     |  | 1183 | 2.42 | 0.89     |
| 6: Completing Projects     | 1046 | 4.22 | 0.67     |  | 1183 | 3.13 | 0.84     |
| 7: Advocating              | 1046 | 4.09 | 0.68     |  | 1183 | 2.77 | 0.83     |
| 8: Difficult Conversations | 1046 | 4.05 | 0.73     |  | 1183 | 2.75 | 0.86     |
| 9: Shared Goals            | 1046 | 3.91 | 0.79     |  | 1183 | 2.49 | 0.83     |
| 10: Integrity              | 1046 | 4.50 | 0.56     |  | 1183 | 4.02 | 0.66     |
| 11: Ethical Decisions      | 1046 | 4.51 | 0.56     |  | 1183 | 4.06 | 0.62     |
| 12: Fair Treatment         | 1046 | 4.57 | 0.55     |  | 1183 | 4.21 | 0.56     |
| 13: Respect Differences    | 1046 | 4.57 | 0.55     |  | 1183 | 4.26 | 0.54     |
| 14: Cultural Recognition   | 1046 | 4.55 | 0.57     |  | 1183 | 4.29 | 0.53     |
| 15: Promoting Community    | 1046 | 4.55 | 0.57     |  | 1183 | 4.26 | 0.58     |

**Cluster 3: Low L-M/Low E-C (24%)**

**Cluster 4: High L-M/Low E-C (25%)**

| Variable                   | Obs. | Mean | St. Dev. |  | Obs. | Mean | St. Dev. |
|----------------------------|------|------|----------|--|------|------|----------|
| 1: Leading/Inspiring       | 1049 | 1.51 | 0.58     |  | 1100 | 2.76 | 0.65     |
| 2: Taking Risks            | 1049 | 1.56 | 0.59     |  | 1100 | 2.84 | 0.62     |
| 3: Prof. Contributions     | 1049 | 1.65 | 0.66     |  | 1100 | 2.85 | 0.64     |
| 4: Collaborating           | 1049 | 1.67 | 0.64     |  | 1100 | 2.94 | 0.62     |
| 5: Supervising             | 1049 | 1.49 | 0.59     |  | 1100 | 2.79 | 0.70     |
| 6: Completing Projects     | 1049 | 1.92 | 0.75     |  | 1100 | 3.04 | 0.60     |
| 7: Advocating              | 1049 | 1.61 | 0.64     |  | 1100 | 2.84 | 0.62     |
| 8: Difficult Conversations | 1049 | 1.58 | 0.62     |  | 1100 | 2.78 | 0.66     |
| 9: Shared Goals            | 1049 | 1.44 | 0.56     |  | 1100 | 2.67 | 0.67     |
| 10: Integrity              | 1049 | 2.46 | 0.81     |  | 1100 | 3.12 | 0.53     |
| 11: Ethical Decisions      | 1049 | 2.45 | 0.80     |  | 1100 | 3.09 | 0.47     |
| 12: Fair Treatment         | 1049 | 2.49 | 0.84     |  | 1100 | 3.13 | 0.49     |
| 13: Respect Differences    | 1049 | 2.53 | 0.88     |  | 1100 | 3.05 | 0.53     |
| 14: Cultural Recognition   | 1049 | 2.54 | 0.92     |  | 1100 | 3.04 | 0.56     |
| 15: Promoting Community    | 1049 | 2.47 | 0.93     |  | 1100 | 2.99 | 0.55     |

“High L-M/High E-C” denotes students who tended to score high on leadership/management items and high on ethics/community items. “High L-M/Low E-C” denotes students who tended to score high on leadership/management items and low on ethics/community items. “Low L-M /High E-C” denotes students who tended to score low on leadership/management items and high on ethics/community items. “Low L-M/Low E-C” denotes students who tended to score low on both sets of items.

over-represented in this cluster. Instead, it was composed primarily of students preparing for the better-remunerated professional occupations.

We found statistically significant over-representations of students in business, engineering, and agricultural/environmental sciences in the High L-M/Low E-C cluster. In addition, students in other fields with strong requirements for technical proficiency were over-represented in this cluster, although not by statistically significant margins. These fields included physical sciences and economics. These findings are partially consistent with the divergence thesis. However, against the expectations of the divergence thesis, students in several technical professions, including computer science, medicine, and other health professions, were not over-represented in this cluster.

We found statistically significant over-representation of students in medicine, health professions, arts, and social work in the Low L-M/High E-C cluster. Students in nursing, life sciences, anthropology/sociology, psychology, history, and literature and languages were also over-represented in this cluster, although not by statistically significant margins. If we include these latter fields, this finding is largely supportive of the divergence thesis in so far as most of the fields in this category are associated with either cultural or human services fields. Students in medicine and life sciences are the exceptions.

We found statistically significant over-representation of students in computer science, physical sciences, and history the Low L-M/Low E-C category. Students in mathematics/ statistics, anthropology/ sociology, economics/political science, psychology, and literature and languages students were also over-represented in this cluster, although not by statistically significant margins. Computer science is the exceptional non-academic field in this cluster. This finding reinforces our sense that the preparation arts and sciences students receive, and their own interests, principally lie elsewhere – presumably in the classroom and the research laboratory or library.

The analysis also indicated differentiation by respondents' socio-demographic characteristics. Men were over-represented in the High L-M/High E-C and High L-M/Low E-C clusters, and women were over-represented in the Low L-M/High E-C and Low L-M/Low E-C clusters – in other words, men tended to be high in leadership-management and women low on this dimension. This finding is consistent with findings in social psychology concerning the higher scores on social dominance measures for men relative to women. Students from low-income backgrounds were more likely to fall in the Low L-M/Low E-C cluster. African Americans and Asian Americans were over-represented in the High L-M/High E-C cluster, and Asian Americans were also over-represented in the High L-M/Low E-C cluster. By contrast, whites were over-represented only in the Low L-M/High E-C cluster.

**Table 5** Fields and demographic categories statistically over-represented in four clusters

|                                       |  |
|---------------------------------------|--|
| Cluster 1                             | Cluster 2  |
| High on Leadership/Management         | Low on leadership/management                     |
| High on ethics/community (24%)        | High on ethics/community (27%)                   |
| Business/Management <sup>***</sup>    | Health Professions <sup>***</sup>                |
| Law <sup>***</sup>                    | Arts <sup>***</sup>                              |
|                                       | Social Work <sup>*</sup>                         |
|                                       | Anthropology/Sociology <sup>†</sup>              |
| History <sup>†</sup>                  |  |
| Upper-Middle/Upper Class <sup>*</sup> | Working Class <sup>**</sup>                      |
| Middle Class <sup>**</sup>            |  |
| Men <sup>**</sup>                     | Women <sup>***</sup>                             |
| African-American <sup>***</sup>       | White <sup>***</sup>                             |
| Asian-American <sup>**</sup>          |  |
| Cluster 3                             | Cluster 4  |
| Low on Leadership/Management          | High on Leadership/Management                    |
| Low on Ethics/Community (24%)         | Low on Ethics/Community (25%)                    |
| Computer Science <sup>**</sup>        | Business/Management <sup>***</sup>               |
| Physical Sciences <sup>**</sup>       | Engineering/Architecture <sup>***</sup>          |
| History <sup>*</sup>                  | Agricultural/Environmental Science <sup>**</sup> |
| Psychology <sup>†</sup>               |  |
| Low-Income/Poor <sup>**</sup>         | Middle Class <sup>***</sup>                      |
| Working Class <sup>†</sup>            |  |
| Women <sup>***</sup>                  | Men <sup>**</sup>                                |
| Other URM <sup>***</sup>              | Asian American <sup>***</sup>                    |
| Hispanic/Latino <sup>*</sup>          |  |

<sup>†</sup> $p < .10$ ; <sup>\*</sup> $p < .05$ ; <sup>\*\*</sup> $p < .01$ ; <sup>\*\*\*</sup> $p < .001$

*Regressions*

We present the results of regressions on the leadership/management scale in Table 6 and results of the regressions on the ethics/community scale in Table 7.

As the first columns on Tables 6 and 7 indicate, results for the field-level-only regressions provide limited support for the neo-classical thesis. Only students in fields with an explicit management or social control orientation (business, law, and, to a lesser extent, public policy) scored high on the leadership/management scale, while many more professional fields (medicine, law, business, education, nursing, social work, and arts) scored high on the ethics/community scale. In addition, aspiring academics in humanities and most social science fields scored high on this latter scale. The explanatory power of the models is, however, low for both outcome variables.

**Table 6** Regressions on leadership/management

| Variables                   | Model 1                      | Model 2                      | Model 3                      |
|-----------------------------|------------------------------|------------------------------|------------------------------|
| <i>Fields</i>               |                              |                              |                              |
| Business                    | .397***<br>(.078)            | .316***<br>(.080)            | .266***<br>(.069)            |
| Law                         | .418**<br>(.161)             | .164<br>(.164)               | .124<br>(.135)               |
| Medicine                    | .124<br>(.108)               | -.093<br>(.113)              | -.182 <sup>t</sup><br>(.108) |
| Other Health Professions    | .074<br>(.078)               | .039<br>(.081)               | .038<br>(.070)               |
| Engineering/Architecture    | .102<br>(.076)               | -.018<br>(.078)              | -.042<br>(.066)              |
| Computer Science            | -.216**<br>(.093)            | -.276**<br>(.096)            | -.219**<br>(-.082)           |
| Public Policy               | .161 <sup>t</sup><br>(.091)  | .127<br>(.093)               | .119<br>(.810)               |
| Nursing                     | .034<br>(.100)               | .023<br>(.101)               | -.076<br>(.090)              |
| Journalism/Communications   | -.059<br>(.148)              | -.042<br>(.149)              | -.022<br>(.127)              |
| Education                   | .036<br>(.076)               | .051<br>(.078)               | -.035<br>(.068)              |
| Social Work                 | -.153 <sup>t</sup><br>(.088) | -.173<br>(.091)              | -.293***<br>(.079)           |
| Arts                        | .083<br>(.129)               | .017<br>(.131)               | -.128<br>(.122)              |
| Mathematics/Statistics      | -.168<br>(.139)              | -.267 <sup>t</sup><br>(.141) | -.192<br>(.132)              |
| Physical Sciences           | -.158 <sup>t</sup><br>(.090) | -.236**<br>(.091)            | -.185*<br>(.078)             |
| Life Sciences               | -.158 <sup>t</sup><br>(.073) | -.189*<br>(.075)             | -.208**<br>(.065)            |
| Environmental/Ag Sciences   | REF                          | REF                          | REF                          |
| Economics/Political Science | -.239*<br>(.106)             | -.281*<br>(.110)             | -.311***<br>(.100)           |
| Psychology                  | -.153 <sup>t</sup><br>(.087) | -.154 <sup>t</sup><br>(.089) | -.192*<br>(.077)             |
| Anthropology/Sociology      | -.186 <sup>t</sup><br>(.112) | -.200 <sup>t</sup><br>(.115) | -.393***<br>(.100)           |
| History                     | -300*<br>(.126)              | -312*<br>(.130)              | -338**<br>(.113)             |
| Languages/Literatures       | -.203 <sup>t</sup><br>(.104) | -.240*<br>(.107)             | -.326***<br>(.095)           |
| <i>Race-ethnicity</i>       |                              |                              |                              |
| African-American            |                              | .110<br>(.079)               | .075<br>(.066)               |
| Asian American              |                              | .116*<br>(.042)              | .129***<br>(.037)            |

**Table 6** (continued)

| Variables                     | Model 1        | Model 2            | Model 3            |
|-------------------------------|----------------|--------------------|--------------------|
| Hispanic                      |                | -.068<br>(.077)    | -.038<br>(.067)    |
| Other URM                     |                | -.039<br>(.112)    | .025<br>(.090)     |
| White                         |                | REF                | REF                |
| <i>Gender</i>                 |                |                    |                    |
| Male                          |                | REF                | REF                |
| Female                        |                | -.119***<br>(.032) | -.100***<br>(.028) |
| <i>Parents' Social Class</i>  |                |                    |                    |
| Poor/Low-Income               |                | -.074<br>(.066)    | .026<br>(.056)     |
| Working Class                 |                | .007<br>(.039)     | .031<br>(.034)     |
| Middle Class                  |                | REF                | REF                |
| Upper-Middle/Wealthy          |                | .035<br>(.037)     | .019<br>(.032)     |
| <i>Time in Program</i>        |                |                    |                    |
| First Year                    |                | REF                | REF                |
| Second Year                   |                | .049<br>(.052)     | -.029<br>(.045)    |
| Third Year or More            |                | .075<br>(.051)     | .044<br>(.044)     |
| <i>University</i>             |                |                    |                    |
| University A                  |                | REF                | REF                |
| University B                  |                | -.208***<br>(.064) | -.153<br>(.054)    |
| University C                  |                | -.50<br>(.067)     | -.066<br>(.056)    |
| University D                  |                | -.312***<br>(.078) | -.022<br>(.066)    |
| University E                  |                | -.164*<br>(.073)   | -.167<br>(.061)    |
| <i>Ethics/Community Scale</i> |                |                    | .490***<br>(.013)  |
| <i>Constant</i>               | .008<br>(.060) | .205**<br>(.099)   | .243*<br>(.084)    |
| Observations                  | 4,443          | 4,374              | 4,310              |
| R <sup>2</sup>                | .032           | .048               | .281               |

Robust standard errors in parentheses.

<sup>†</sup> $p < .10$ , \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

As the second columns of Tables 6 and 7 indicate, the introduction of socio-demographic and academic controls improved model fit only very modestly, while decreasing the number of fields associated with both dependent variables, net of

**Table 7** Regressions on ethics/  
community

| Variables                   | Model 1                     | Model 2                      | Model 3                      |
|-----------------------------|-----------------------------|------------------------------|------------------------------|
| <i>Fields</i>               |                             |                              |                              |
| Business                    | .154*<br>(.078)             | .076<br>(.082)               | -.077<br>(.071)              |
| Law                         | .436**<br>(.153)            | .262 <sup>†</sup><br>(.156)  | .119<br>(.132)               |
| Medicine                    | .297**<br>(.104)            | .154<br>(.111)               | .201 <sup>†</sup><br>(.107)  |
| Other Health Professions    | .198*<br>(.082)             | .122<br>(.085)               | .111<br>(.075)               |
| Engineering/Architecture    | .091<br>(.075)              | .022<br>(.079)               | .023<br>(.068)               |
| Computer Science            | -.085<br>(.097)             | -.155<br>(.101)              | -.002<br>(.088)              |
| Public Policy               | .052<br>(.091)              | .005<br>(.092)               | -.066<br>(.081)              |
| Nursing                     | .202*<br>(.101)             | .152<br>(.103)               | 0.173 <sup>†</sup><br>(.091) |
| Journalism/Communications   | 0<br>(.152)                 | -.012<br>(.152)              | -.001<br>(.131)              |
| Education                   | .153*<br>(.077)             | .144 <sup>†</sup><br>(.079)  | .117 <sup>†</sup><br>(.069)  |
| Social Work                 | 0.258**<br>(.091)           | .185*<br>(.093)              | .269***<br>(.084)            |
| Arts                        | .359**<br>(.117)            | .285*<br>(.120)              | .273*<br>(.112)              |
| Mathematics/Statistics      | .163<br>(.144)              | -.185<br>(.144)              | -.046<br>(.135)              |
| Physical Sciences           | -.137<br>(.091)             | -.154 <sup>†</sup><br>(.093) | -.021<br>(.080)              |
| Life Sciences               | .031<br>(.076)              | .008<br>(.077)               | .106<br>(.069)               |
| Environmental/Ag Sciences   | REF                         | REF                          | REF                          |
| Economics/Political Science | .088<br>(.111)              | .065<br>(.116)               | .179 <sup>†</sup><br>(.102)  |
| Psychology                  | .097<br>(.090)              | .072<br>(.093)               | .125<br>(.081)               |
| Anthropology/Sociology      | .313**<br>(.107)            | .314**<br>(.109)             | .439***<br>(.095)            |
| History                     | .093<br>(.122)              | .060<br>(.122)               | .183 <sup>†</sup><br>(.111)  |
| Languages/Literatures       | .182 <sup>†</sup><br>(.108) | .130<br>(.111)               | .264**<br>(.101)             |
| <i>Race-ethnicity</i>       |                             |                              |                              |
| African-American            |                             | .044<br>(.079)               | -.002<br>(.068)              |
| Asian American              |                             | -.027<br>(.041)              | -.082*<br>(.036)             |



**Table 7** (continued)

| Variables                          | Model 1                      | Model 2           | Model 3                      |
|------------------------------------|------------------------------|-------------------|------------------------------|
| Hispanic                           |                              | -.063<br>(.074)   | -.014<br>(.065)              |
| Other URM                          |                              | -.074<br>(.121)   | -.098<br>(.101)              |
| White                              |                              | REF               | REF                          |
| <i>Gender</i>                      |                              |                   |                              |
| Male                               |                              | REF               | REF                          |
| Female                             |                              | -.023<br>(.032)   | .031<br>(.029)               |
| <i>Parents' social class</i>       |                              |                   |                              |
| Poor/Low-Income                    |                              | -.213**<br>(.069) | -.168**<br>(.059)            |
| Working Class                      |                              | -.042<br>(.038)   | -.046<br>(.034)              |
| Middle Class                       |                              | REF               | REF                          |
| Upper-Middle/Wealthy               |                              | .025<br>(.037)    | .015<br>(.033)               |
| <i>Time in program</i>             |                              |                   |                              |
| First Year                         |                              | REF               | REF                          |
| Second Year                        |                              | .157**<br>(.052)  | .131**<br>(.046)             |
| Third Year or More                 |                              | .066<br>(.053)    | .026<br>(.044)               |
| <i>University</i>                  |                              |                   |                              |
| University A                       |                              | REF               | REF                          |
| University B                       |                              | -.144*<br>(.062)  | -.020<br>(.052)              |
| University C                       |                              | .018<br>(.066)    | .049<br>(.055)               |
| University D                       |                              | -.203**<br>(.078) | -.042<br>(.067)              |
| University E                       |                              | -.024<br>(.071)   | .067<br>(.061)               |
| <i>Leadership/Management Scale</i> |                              |                   |                              |
|                                    |                              |                   | .498***<br>(.014)            |
| Constant                           | -.109 <sup>†</sup><br>(.061) | -.031<br>(.100)   | -.146 <sup>†</sup><br>(.085) |
| Observations                       | 4517                         | 4446              | 4310                         |
| R <sup>2</sup>                     | .015                         | .026              | .263                         |

Robust standard errors in parentheses.

<sup>†</sup> $p < .10$ , \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

covariates. Business remained as the only field positively associated with leadership and management, net of covariates, and law, education, and social work remained as the only professional fields associated with ethics and community, net of covariates. Humanities and some social science fields also continued to be associated with ethics and community, net of covariates. The model suggests that some part of the effect of fields is mediated by the social characteristics of individuals studying the field. Asian-American students and men scored higher on the leadership/management scale and students from lower-income families tend to score lower on the ethics/community scale, net of covariates. The university controls add little to the explanation, indicating that the five universities are more similar than different from one another.

As the third columns of Tables 6 and 7 indicate, the introduction of the component scores increases model fit for both dependent variables. These models explain more than one-quarter of the variance for both leadership/management and ethics/community, and the effect of the component scores dwarfed the effects of all other variables in the model. Field-level effects remained comparable to earlier results, with only business students scoring high on leadership/management, net of covariates, and only social work students, together with students from most of the foundational arts and sciences fields, scoring low, net of covariates. By contrast, students in medicine, nursing, education, social work, and arts scored high on the ethics/community scale, net of covariates, as did students in humanities and some social science academic fields. As before, Asian-American students and men scored high on leadership/management net of covariates, while students from low-income families, now joined by Asian-American students, scored low on the ethics/community scale, net of covariates. The results provide limited support for the neo-classical thesis with respect to leadership/management and for the divergence thesis with respect to ethics/community, albeit with the proviso that students in at least one dominant professional field, medicine, also scored high on the ethics/community scale.

## Discussion

Each of the three conceptions of professionalism is attractive to subsets of graduate students in the gradSERU sample. When we look at the sample as a whole, support is somewhat greater for the divergence thesis than for the other two. At the same time, and notably, students from dominant groups in American society and those preparing for economically powerful occupations are more likely to see their preparation in light of the hybridization thesis.

Scores on ethics/community were significantly higher on average than scores on leadership/management, providing a degree of support for the neo-classical thesis. However, as we showed in the cluster analysis, only one-quarter of students in the sample adhered to an outlook fully consistent with the neo-classical ideal by scoring low on leadership/management and high on ethics/community. In particular, medical, arts, education, social work, and counseling psychology students scored high on ethics/community and low on leadership/management. In addition, students in basic arts and sciences fields of

life sciences, anthropology/sociology, psychology, history, and literature and languages showed a similar profile (see Table 5). Women and whites were also over-represented in this cluster. Business-oriented and technical professionals were under-represented.

The hybridization thesis gained a similar level of support in the cluster analyses. One-quarter of the respondents scored high on both leadership/management and ethics/community. Its appeal is centered in the professional programs of business, law and to a lesser extent also in medicine, other health professions, and public policy. It is also more appealing to relatively privileged groups in the American social structure: men, upper-middle and upper-class students, and Asian Americans students. Moreover, while an orientation toward leadership and management clearly does not always go together with an orientation toward ethics and community in this sample, the two do go together frequently enough *between fields* of study and *across socio-demographic groups* to produce relatively strong net associations with one another, as indicated in the regression analyses.

Support for the divergence thesis was somewhat stronger than for the other two. A majority of graduate professional students in the sample scored either high on leadership/management and low on ethics/community *or* low on leadership/management and high on ethics/community. Moreover, the distribution of fields in the High L-M/Low E-C and Low L-M/High E-C categories parallels the expectations of the divergence thesis, with a few notable exceptions. Students preparing for technical professions like engineering and architecture tended to score relatively high on leadership/management and relatively low on ethics/community. Conversely, students preparing for cultural and human services professions, such as arts and social work, tended to score high on ethics/community and low on leadership/management. At the same time, students in some technical fields, such as computer science, were not over-represented in the High L-M/Low E-C cluster, and students in some cultural fields, such as journalism, were not over-represented in the Low L-M/High E-C cluster. The reasons for these anomalous findings require additional investigation. The divergence thesis also requires modification to take into account the propensity of students in some high-status fields, notably business and law, to score high both on leadership/management *and* ethics/community.

Finally, we note that none of the three conceptions of professionalism were descriptive of students preparing for several of the arts and sciences academic disciplines. The center of gravity for students in the physical and mathematical sciences, in particular, consists of low scores on both leadership/management and ethics/community.

The regression results provide a valuable perspective on the importance of professional fields relative to the demographic variables we also investigated. In our saturated model, students in business programs were, not surprisingly, more strongly oriented toward leadership and management than others, and students in social work and all of the basic arts and sciences fields were more detached, as were, anomalously, students in computer science. By contrast, students in medicine, nursing, social work, arts, and in the basic fields of humanities and social sciences were more strongly oriented to ethics and community than others. These are for the most part helping or highly socially conscious fields and their orientation to ethics and community is consequently hardly surprising.

While these selected professional fields were more closely connected to individuals' understandings of professionalism than the demographic variables in the analysis, the latter did also contribute to explanation. The regression findings indicate that Asian-Americans and men were more oriented to the leadership and management component of professionalism, while Asian-Americans and low-income students were relatively detached from the ethics and community component. The findings are suggestive of distinctive socialization patterns for Asian-Americans and men in relation to social dominance, as well as the possibility that successful low-income students may be more concerned with their own social mobility than with the larger social purposes of professionalism.

### *Policy Implications*

Critics of contemporary professionalism argue that the decay of ethical and community serving elements in professional ideology have rendered the professions servants not of their clients but of bureaucratic and market control systems (see, e.g., Sullivan 2015). While there is some truth to this charge, we should recognize also its shortcomings. An appeal to client-serving values can and perhaps most often does do little more than provide rhetorical cover for a variety of concrete actions which may or may not be consistent with the values projected. Teachers, for example, may claim to be devoted to their students while spending as little time as possible providing the detailed feedback that can help them to improve. Something similar would be true of doctors who fail to ask all the necessary questions or to perform all the necessary tests for their patients even as they present themselves as devoted to client service. Moreover, managers are often as involved in maintaining quality of service as are professionals. They do so by emphasizing organizational commitments to quality, by promulgating rules and practices that improve quality of service, by rewarding those who exemplify these commitments, and by sanctioning those who fail to do so. These qualifications greatly reduce the validity of the critics' indictment of managerial control as a threat to professional ethics. The reality is quite a bit more complex.

With these provisos in mind, we do nevertheless see a potential public benefit in finding ways to effectively revive and institutionalize the ethical and community-serving elements in the culture of professionalism. In this discussion of the policy implications of our findings, we will use the term "professional responsibility" as a synonym for the ideal of high-quality client service. We focus here only what university-based training programs, the locus of our study, can do to support and reinforce professional responsibility. We emphasize (1) addressing weak points in the preparation of students in specific fields, (2) better understanding of the varieties of moral thinking that support professional responsibility, and (3) the revision of professional development programs to incorporate consequential but relatively neglected themes related to professional responsibility.

Skill training at the highest feasible level is one improvement that is little credited but morally essential – and especially necessary in professional programs that prioritize ethics and community service over expert skills, as some social service

(Costello 2005) and K-12 education (Levine 2006) programs do. The rhetoric of elevated morality is a poor substitute for the solidity of craft skill if the latter is missing. Take, for example, a doctor whose actions express community serving values but who lacks occupational craft skill. Let's say she fully commits, as a normative ideal, to the improvement of the health of the patients she encounters. But let's also say that this physician is poorly trained and cannot diagnose or prescribe properly. It seems clear in such cases that craft skill is a more important feature of professional responsibility than socially normative values. In teaching, the analogous example would be the high-minded idealist whose students learn little because he has not mastered the techniques of effective instruction, motivation, and assessment as compared to the master teacher whose sense of social responsibility extends no further than the evidence of learning and the motivation that he produces in his students.

Moral sentiments associated with professional responsibility do not come in one variety only. Instead, three ideal types of moral thinking are common among and relevant to students preparing for the professions: (1) the morality of nurturance, (2) the morality of duty, and (3) the morality of reciprocal exchange (Brint 2015). Our contention is that teachers and administrators in professional programs must learn to weave together these strands in ways that will appeal to students whose moral thinking runs along each of these three distinctive tracks. The idea of nurturing care is an appealing rhetoric and moral regulator, especially for political progressives and liberals (Haidt 2012; Lakoff 1996) and perhaps also for women (Gilligan 1982). For those with more traditional impersonal moral outlooks, the idea of performing one's duty to abide by a set of transcendent principles will more often resonate. This perspective has traditionally been more common among men (Gilligan 1982) and among political moderates and conservatives (Haidt 2012; Lakoff 1996). The specific transcendent principles adopted reflect differences among professional fields, including contributions to learning for professors, contributions to justice for attorneys, and contributions to health for physicians. Utilitarianism, the third common form, is often adopted as a rationale for self-interested behavior and consequently is more difficult to engage in discussions of professional responsibility. However, utilitarian students who are not solely oriented to their own self-interest can appreciate that reciprocal exchange is at the heart of professional life. This is true in so far as the responsible work of professionals ideally adds value to the lives of clients while clients add value to professionals through the opportunities they provide for stable practices and adequate incomes.

The themes we envisage for professional development programs include discussions of the origins and meanings of professionalism, the ethical lapses and social biases of previous generations of practitioners, and contemporary threats to quality of service. In addition to tracing turning points in the history of the profession, these programs could address what is gained and lost in the transition from society-serving to management-serving professionalism. Social biases are another important topic because virtually all of the professions have been complicit in the inadequate treatment and representation of marginalized populations (see, e.g. Furl et al. 2002; Obermeyer et al. 2019; Woodward 2019). Contemporary threats to quality of service come in many forms, including overly-demanding service loads as a result of market

expansion or cost control; bureaucratic regulations that constrain professional judgment; and the self-interested behavior of professionals themselves (Friedson 2001). Each of these threats merits discussion for the purpose of heightening awareness of the obstacles to professional responsibility. In professional development programs, it would be useful to highlight also the means that quality-conscious organizations (Adler et al. 2008) and expert practitioners themselves (Schoen 1983) employ to meet these challenges. These efforts to educate for professional responsibility may be effectively reinforced when professional accrediting bodies look for evidence that students have given thought to these issues (see, e.g., ABET 2020) and when licensing examinations require thoughtful engagement with them, as many now do (see, e.g., Allen 2022).

### *Future Research*

The research reported here represents a novel first foray into the comparative study of programmatic and student emphases as influences on evolving conceptions of professionalism. The next step will be to extend the analysis to a larger sample of universities and graduate students. Another desirable next step would be to see how these orientations play out in work settings. Given the influence of management priorities on professional work, it is entirely possible that professionals have accommodated to these priorities in their work settings even when they are not prepared for them or do not actively embrace them prior to employment (see, e.g. Exworthy and Halford 1999; Scott et al. 2000; Scott 2008). At the same time, it would be unwise to ignore the potential of socialization experiences in graduate school as an influence on professional practice. If these experiences are consistent with the priorities of work organizations, the lessons of graduate education will reduce the need for intensive acculturation at work. If they are inconsistent, they can serve as a resource for resisting the priorities of management in so far as these priorities conflict with responsible professional practice (see, e.g., DiBenigno 2022).

### **Declarations**

**Conflict of interest** The authors report no conflict of interest. The research was conducted without support from external funding agencies.

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