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Classifying Universities and Their Departments: A Social World Perspective

Most means of differentiating higher education institutions emphasize their structural characteristics: faculty size; highest and kind of degree granted; level of external support; size of endowment; number of students; average board scores; admissions selectivity; tuition; and so on. In this article, I offer a view of differentiating schools that underscores their *cultural* similarities and differences.

In this work, culture refers to the meaning of membership in a school. It captures what life is like on the inside of departments by representing people's experience and interpretation of educational organizations. The value of examining institutional cultures—and how they may be classified—lies in *identity*, both institutional and individual: we glean how people construct institutions and establish meaning in them. This allows us to understand the reciprocal relation: how individuals experience institutions and how, in turn, the substance of academic life might be characterized across the institutional spectrum. In what follows, the intent is not to reject existing classification systems, for merit can be found in them as evidenced in their several usages. Rather, the goal is to provide an alternative perspective that highlights the cultural distinctions among schools, distinctions that remain hidden in prevailing schemes.

Research for this work was supported by a grant from the National Science Foundation (SBR 95-01420)

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The Journal of Higher Education, Vol. 76, No. 1 (January/February 2005)
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Structural Classification

The Carnegie system of institutional classification is arguably the most widely used and recognized in American higher education. The 1994 version includes all colleges and universities in the United States that are degree-granting and accredited. The classification system divides institutions into six types: research, doctoral, master's, baccalaureate, associate, and specialized. It further divides each of the first four types (research through baccalaureate) into two tiers (e.g., research I, research II). One chief criterion drives the classification: a school's highest level of degree conferred and the percentage of this degree among all other degree types awarded. For example, baccalaureate I colleges are "primarily undergraduate colleges with major emphasis on baccalaureate degree programs. They award 40 percent or more of their baccalaureate degrees in liberal arts fields and are restrictive in admissions" (Carnegie Foundation for the Advancement of Teaching [Carnegie], 1994, p. ix). The technical report states that highest level of degree conferred is used as a proxy to group American colleges and universities "according to their missions" (Carnegie, 1994, p. vii).

Authors of the Carnegie report wrote that they "oppose the use of the classification as a way of making qualitative distinctions among the separate sectors" (Carnegie, 1994, p. vii). But it is precisely in the qualitative details where one may find meaningful similarities and differences among institutions. Harvard and Howard Universities fall into the same Carnegie category as research I schools. Yet their institutional cultures might suggest significant distinctions in how each school is organized and how each represents itself in the universe of colleges and universities. People on the inside of these schools may account for life within them in systematically distinct ways. Yet the substance of similarity and difference, beneath that of sheer degrees granted, remains unknown. Problematic contrasts of this sort can be made among numerous schools, from Georgia to Georgetown (both research I institutions), in each of the sectors comprising the Carnegie classification.

Distinctions among schools included in the 2000 Carnegie Classification are even less clear. The 2000 report consolidated the institutional groupings by eliminating the I and II tiers (Carnegie, 2000). The effort has been directed toward eliminating the Carnegie classification as an institutional ranking device; the result has been a rendering of more institutional similarity than difference, making it increasingly problematic to ascertain substantive contrasts among schools.

U.S. News and World Report (2002), but one of numerous other examples, offers a different means of classification; its emphasis remains

structural. In this case the variables range from rates of freshmen retention to rates of graduation, from student-faculty ratios to rates of acceptance in admissions. The variables are used to calculate an overall score that results in a hierarchical ranking of institutions. (For a comprehensive review of reputational classification systems used in higher education, see Webster, 1992.)

In these means of classification, the cultural sides of schools are unrevealed. That is, a predominant system of meaning created through interaction by faculty who work and study in a school remains obscured. But such meaning systems have the potential to convey considerable information about the identities of schools and those of the individuals who belong to them. School culture, I argue, establishes a ground on which to see "what life is like" on the inside of higher education institutions. Structural approaches render this an unrealizable goal: attributes such as degrees granted and rates of retention may provide some basis to make inferences about the substance of life on the inside of institutions, but the tie is tenuous. A cultural approach has the potential to reveal how people make meaning of educational environments and whether the patterning of their experience yields an alternative means of institutional classification.

Cultural Classification

Just as there are many ways in which to classify institutions structurally, so are there culturally, in principle if not in practice. Consequently, any proposed framework must specify how it is operationalized: how it originates, what goals it serves, and how it functions.

I propose a culturally based system of classification that originates in faculty conceptions of their careers as departmentally lived, experienced, and interpreted (cf. Czarniawska, 1997, 1998). Such a system seeks to classify departments and institutions on the basis of how academics conceive of professional success and failure, under the assumption that these careers take shape in organizational contexts. Talking to academics about conceptions of careers offers a lens on the inside of institutional life. We see how professors create meaning about what they do in the context of where they work in the spectrum of U.S. colleges and universities. Such a framework strives to satisfy an unmet goal, that of ascertaining what "life is like"—seen through the eyes of practitioners—in various sectors of academe.

The specific framework to be offered may be called a *social world* perspective on higher education. Such a framework treats departments and institutions of all kinds as comprising a delimited, generalizable set

of people-inhabited social worlds. Social worlds possess several defining properties. In this study, social worlds correspond to the different types of departments and universities in which academics work. They refer to human groups—established by their organization in a university—that develop distinct orientations to their work based upon collectively generated systems of meaning and values that academics assign to how they perform and experience their professional roles. In this analysis, departmental context is key, for it is in these contexts—set apart from each other—where important differences arise in the experience of work. Within a profession, social worlds may be seen to prescribe significantly different bases for satisfaction and ill-content, in the end creating different self-identities among those plowing a shared professional field.

The sociological use of "world" as metaphor to situate individuals and their roles in society is not unique to this study. The metaphor has been adopted by others to gain intimate knowledge about what it is like to be part of a social world, what social conventions constitute social worlds and set them morally apart from others, and how people create meaning about themselves vis-à-vis their membership and nonmembership in social worlds. For example, Becker (1982) speaks of "art worlds." He explains how art is socially organized as an institution and what it is like to be part of any one of four worlds of art: the world of integrated professionals, the world of mavericks, the world of folk artists, and the world of naïve artists.

Community studies in sociology have frequently made use of social world as metaphor to account for the differentiation, and the inner workings, of urban and rural enclaves. In his study of the social organization of the inner city, Suttles (1968) imparts an understanding of the social worlds of the metropolis: we learn what constitutes the world of Italians, Mexicans, Puerto Ricans, and blacks and the conditions under which those worlds remain separate, collide, and sometimes work together.

Strauss (1978, 1993) has suggested that social world as metaphor represents the most promising way to understand all of society, its groupings, and processes. He does so for two major reasons that distinguish the social world perspective. First, the social world perspective shows an explicit concern for social ecology by locating and attempting to account for behavior in terms of sociocultural environment. Second, the social world perspective is explicitly concerned with the social-interactive basis on which reality and meaning are created and framed. At root, the perspective moves from the "ground up," seeing how macroforces are established from microprocesses and in turn how macroforces effect microfunctioning. Thus, the distinctiveness of the perspective lies in its capacity to explain social organization—such as the organization of

academe—by linking individuals and their environments to formulate a grounded view of how institutions are created and understood by people.

While the use of social world as metaphor is not unique among sociological studies generally, it would appear to be unique among sociological studies of higher education. An exception may be found in Clark (1987), who speaks of small and different worlds. Clark provides an extensive treatment of many variables that factor into the way in which the American professoriat is socially organized, including distinctions among institutional culture, competing bases of organizational authority, and the differentiation of academic career lines. Moreover, Clark's analysis includes narrative accounts from diverse individual practitioners. However, Clark's usage of the term "world" is thematic: it conveys the mix of institutions, fields, and practitioners found in the academic profession. The term is not employed to systematically differentiate types of departments or institutions.

In earlier work, Clark (1962) developed a typology of institutional cultures based upon students' identification with school missions and their level of engagement with ideas. The result was a framework of student subcultures—those consisting of the "academic," "collegiate," "vocational," and "nonconformist" enclaves. Life among, and life within, institutions could be characterized in terms of these tendencies. But the typology is based on student, rather than faculty, culture. Thus a void remains in how to systematically view, from a cultural perspective, the faculty side of academic life. In light of its fundamental character, and because of the overriding absence of cultural frameworks for higher education institutions, the social world perspective is adopted in this study as an example for cultural analysis. This of course does not mean it is the only way in which to approach and study institutional culture; many such means may exist. The social world perspective constitutes one of them. If it also functions to suggest other approaches, its goal as a spur for alternative classification will have been surpassed.

Finally, in offering a cultural framework of departments and institutions, the goal of this article is to complement, and not to reject, structural frameworks of schools. Structural frameworks call upon significant data, like that cited above, to characterize colleges and universities. Cultural frameworks also seek to call upon significant data to render characterizations of institutions, but it is data of an altogether different character and kind, and thus these frameworks seek to reveal equally important similarities and differences among institutions that remain hidden in structural systems.

Numerous sociologists, both contemporary and classical (e.g., Griswold, 1986; Mead, 1934; Schutz, 1970; Wuthnow, 1987), have argued

that the relationship between structure and culture is an *interactive* one. That is, they have argued that structure and culture are most profitably viewed in reciprocal relation, interacting and responding to one another. These analysts have arrived at this symbiotic view in response to what have proven to be less productive stances of arguing or attempting to predict, for example, that "one comes before the other" or "one is superior to the other"—stances which have typically resulted in people painting themselves into corners, unable to gain sufficient analytic leverage on problems requiring theoretical inclusiveness. Thus, in this work, structural and cultural classification stand on equal moral ground, but offer different views of the landscape. The present essay seeks to expand our vision of the cultural terrain.

Data and Method

In order to formulate a cultural typology of departmental and institutional classification that is based on faculty in academe, I structured this work around interviews with academics about their careers. I wanted to pay special attention to academics' "ways of knowing": that is, how they envision and go about behaving in their departmental environments. I proceeded with this view on the premise that people's beliefs and actions do not arise or manifest themselves in isolation from the places in which people interact. Departments provide academics tools with which to craft a self-identity, much as environments do for other occupations. Situations and their consequences are defined as real through collectively generated systems of meaning (Garfinkel, 1967; Goffman, 1959, 1967; McHugh, 1968; Thomas, 1923). Thus, in order to eventually postulate a cultural classification system, we need to acquire a detailed understanding about the group *modus operandi* found in departments where professors work.

This work is based on a national study of academics—physicists specifically—sampled from departments at six universities (see Hermanowicz, 1998). The present article builds upon the earlier study by more fully elaborating the cultural basis of academic worlds of work, specifying the utility of a cultural classification system of higher education institutions, and detailing how such a system is set apart from prevailing structural means of institutional classification.

The departments in this study were selected based upon their ranking by the National Research Council (NRC) assessment of doctoral-granting institutions (Jones, Lindzey, & Coggeshall, 1982). The NRC evaluated departments according to six criteria: program size; the characteristics of graduates; university library size; the amount of research support;

the scholarly reputations of faculty and programs; and the records of publications attributable to the departments. (An additional NRC report and ranking was issued in 1995 [Goldberger, Maher, & Flattau, 1995]. The fieldwork on which this study is based was conducted in 1994, hence the use of the earlier report. Departments selected from the earlier ranking maintained their positional ranks in the later report.) These characteristics, like those found in other differentiating schemes, are structural. For the purposes of the present analysis, they provide entree into departments of different kinds in order to ascertain any systematic *cultural* divisions. It is conceivable that structural differences correspond to cultural differences (cf. Griswold, 1986; Mead, 1934; Schutz, 1970; Wuthnow, 1987). Such cultural distinctions may reveal significant departmental contrasts, using different data and criteria for classification than that employed in structural systems.

I selected top-, middle-, and low-ranking departments on the premise that differences in these departments establish different cultural conditions for careers. By including departments that represent the two extremes and the mean of environments in which scientists work, I have aimed to maximize variation in the careers of academics. I have thus sought to include a wide range of possible cultural environments in the study to see how they manifest themselves. It should be made clear that academic departments are the unit on which data were collected, and are therefore the chief organizing unit of analysis in this study. A more general system of cultural classification that encompasses institutions will be explained later in the discussion.

Roughly equal numbers of physicists (around 20) were selected from each of the three departmental "tiers." Six departments were randomly selected within these tiers to equalize the number of respondents from each of the tiers. (Two departments comprise the top tier; one the middle tier; and three the low tier.) A total of 60 physicists were interviewed. A summary of the distribution of respondents by departmental tier is presented in Table 1.

TABLE 1
Number of Physicists by Departmental Tier

Top	23
Middle	18
Low	19
Total	60

Eighty-seven percent of the professors in the study have worked only at their present departments; thus changes in career and identity that stem from mobility are small. In other words, low inter-institutional mobility provides a comparatively stable social context in which to assess variation in cultural conceptions of success and failure.

Physicists—as opposed to other types of academics—were selected because of the privileged place they have assumed in the history of knowledge (Butterfield, 1957; Lundberg, 1947; Paul, 1980). They are regarded as having a kind of genius that sets them apart from ordinary mortals. Physics is taken as society's science par excellence. It is often said to be society's oldest science, the most exact, the most mathematical, the most objective—the hardest of all the hard sciences. Even in the popular mind, physics has a recognizable genealogy of immortals: Copernicus, Einstein, Kepler, Newton, Ptolemy—a secular pantheon, which affirms the heroism involved in carving out a scientific life. A pantheon such as this perpetuates a dream of great accomplishment for those who follow by providing exemplary cases that sustain that dream. Because demigods are part of the direct professional parentage of those who enter the field of physics, the mythification of careers may be especially prominent in this field. Thus, if one wants to find out how scientists live with this sort of company and how they perceive their careers unfolding in light of the expectations such company creates, physics is an ideal place to start.

Other fields may also be marked by a pantheon of figures whose accomplishments have established performance standards to understand kinds, varieties, and gradations of success and failure in those fields (see Becher, 1988). In this regard, career prototypes—found across a wide range of fields, from business to journalism to classics—establish a collective understanding for members of a given field about achievement, lack of achievement, and extraordinary achievement. By the same token, while many fields may be marked by enshrined figures who establish career prototypes and understandings of career accomplishment, there may be important distinctions among fields in how their members define success and failure, a subject to which I will return in the conclusion.

All of the physicists were asked a set of questions about their professional biography and their conceptions of career success and failure. The interview protocol for the broader study contained 30 open-ended questions in addition to follow-up probe questions (Hermanowicz, 1998, pp. 211–213). The sections of the protocol dealing specifically with career success and failure, on which this article is based, contained 12 questions; those sections have been extracted in Chart 1 below. As one can see, the questions, while asked of physicists, are generic and can be readily

applied to a range of academics, since career success and failure are generally paramount issues in all fields (Merton, 1973a, 1973b, 1973c).

Under assurances of individual and institutional anonymity, the interviews were conducted in person by the author at the scientists' offices. They averaged 90 minutes in length. All of the interviews were tape-recorded and transcribed for analysis.

The interview data are used to interpret how people assign meaning to their and others' careers within the institutional-social systems in which they and others are enmeshed. The objective is not to assess how accurately individuals recall aspects of their careers—that would be impossible. It is rather to see how individuals account for themselves, where they assign meaning, and how they organize a narrative to present a coherent self-identity and representation of the departments in which they work. The accounts should be viewed, then, as constructed representations of individuals by the individuals themselves. The data gathered enables one to draw a profile of what academics take to be normal and expected in the environments in which they work, constituting localized "ways of knowing" (Geertz, 1983).

Constructing Academic Worlds

A direct way in which to ascertain how, if at all, social worlds exist in the minds and actions of faculty is to examine the moral orders constituting the worlds, for social worlds cannot exist without a system of norms that governs behavior within them (Durkheim, 1965; Geertz,

CHART 1

Interview Questions on Career Success and Failure

I. Generalized Definitions of Success Ladders

1. What do you associate with a "successful" career in physics?
2. What do you think are the most important qualities needed to be successful at the type of work you do?
3. What does *ultimate* success mean to people working here?
4. Is there an understanding of a *minimum* needed in order to maintain respect among people here?
5. Is there an understanding of a *failed* career among colleagues here?
6. Taking your colleagues in this department, how would you say their success varies?
Probe: Have they advanced at the same rate?
7. Where do you place yourself among that variety?

II. Conceptions of Future and Immortalized Selves

1. What do you dream about in terms of your career?
2. What ultimate thing would you like to achieve?
3. How do you envision yourself at the end of your career?
4. How would you like to be remembered by your colleagues?
5. What about your life do you think will outlive you?

1973, 1983). A moral order, as the term implies, consists of a social arrangement of desired and valued actions, beliefs, and orientations held among a group that has been organized around a certain purpose or set of purposes. In other words, it specifies how things ought to be (even though reality almost always deviates from the moral prescription). In their application here, moral orders tell about how academic life is structured on the inside of departments.

In each of my interviews, I asked the physicists how they conceive of success and failure. I asked what "ultimate" success means and what they associate with "minimal" success. I further asked them to describe, as best they could, how the successes of their local colleagues vary. These questions were not meant as exercises for scientists to speak about careers in oblique abstraction. Rather, they served as ways for them to characterize careers, indeed varieties of careers, by placing the careers in a cultural context. In talking about how physicists conceive of success, of extraordinary success, and of lack of success, we are talking about two central aspects of career experience. The first aspect is how personal legitimacy is established (and sometimes lost) within specific academic environments. The second encompasses images of how the self is modeled. In departments, careers are symbolic: they stand for something greater than the individual. In seeing how scientists depict their own and others' careers, we canvass a cultural landscape in which those careers acquire meaning and significance.

To help keep the discussion straight, I will organize it by tier, since that was the first point of entree to the people interviewed. For simplicity, and short of more meaningful cultural identifications that can be applied only after the data have been analyzed, I will refer to the departments studied as top, middle, or low tier.

The Top Tier

Moral orders are elaborated by those whose careers may be bound by normative underpinnings constituting the orders. Scientists who described what it is like to work in these top tier departments shed light on the baseline conventions from which people operate. Our first informant is a young scientist who recently earned tenure in one of the top tier departments. He works at a public institution with a highly reputable department of physics. For this scientist, the names of other scientists at the school symbolize many of the qualities that the institution stands for:

When I walk down the corridors of this institution and I look at the names on the doors, to me, it's like being in the hall of fame. The names that one sees on the doors, for me, are the names of heroes. (Interview No. 23)

The influence of place on the person is keenly felt. Places transmit values that frame one's way of behaving and knowing. Our informant talks about his career in its environmental context:

It [the place] has really benefited it [the career] because the standards are just uniformly high, and I'm not convinced that young scientists have terribly well-defined intrinsic standards. I think the very best may, but generally speaking, I think people's research quality and attention to detail is to a substantial extent colored by the expectations of their colleagues. I'm not saying that people scrutinize my papers. I can send out whatever I want, but my colleagues are just uniformly high-caliber people, people with really high standards of research and integrity and commitment to the [science] community. And because of that, I know that's how my parameters got set. I would hope to be, for the way I conduct my research, the part that I have control over, I would hope that those kind of high-caliber characteristics sort of rubbed off. You swim with Olympic swimmers and you behave like one. (Interview No. 23)

Environments also constrain. Where Olympic swimmers are the standard or the aspiration, the most daunting constraint may be the place itself. The call to success operates not only as an incentive but also as a burden, as the scientist discusses further:

There is one constraint, and that is—this sounds absurd—but in a way, success is a constraint. Everybody here pretty much is successful, to the extent that they are regarded as international leaders in whatever field they choose to work in. What that means is, it means that sometimes you have to, you feel you ought to continue to produce in something, in an area in which your interest is slightly dwindling, in order to maintain a high profile. No department head has ever said, "You should continue to work in such and such an area." Nobody has, except colleagues in informal discussions with no sort of scrutiny, but just sort of friendly chats. We all talk about where we are headed and what we are doing, how we should best foster our own careers. . . . To some extent, the quality of the place is a responsibility. (Interview No. 23)

At root, the top tier is characterized by intense activity. People appear busy, if only by the rhetoric they use to describe the institution and professional life in it. There is an air of distinct seriousness and dedication. Every department displays gradations of activity, but as we see, even what is considered the barest effort in the top tier still involves engagement in the same activity—research—though in reduced magnitude. The moral order includes a collective understanding of what one should do minimally to maintain respect:

You have to publish papers on something in the mainstream journals. And it's absolutely clear what they are. If you show me somebody's publication list for the past five years, just by looking at the journals, I can tell you

whether they are active or not. . . . *Physical Review*, *Physical Review Letters*, *Journal de Physique*, *Journal of Physics*, and many more. There are learned peer-reviewed journals, and then there are the rest. And if you are not publishing at least three papers a year . . . in those sorts of journals, then you have ground to a halt. (Interview No. 23)

Moral orders may be viewed as two sides of a coin. We learn as much about groups by seeing what they desire and expect as by ascertaining what they shun. Academic departments establish boundaries of performance. Professors possess conceptions of success as well as of failure, and these conceptions are defined on both social and individual levels. Personal definitions of success and failure may differ among individuals, even among the individuals who compose one group. Scientists may be viewed as "successful" by dint of having been rewarded by the science community. At the same time, those same scientists may view themselves as failures for not having satisfied personal expectations set at a higher level. In spite of such individual differences, people recognize the social definitions that distinguish among performances.

For the top tier, we have heard where the minimum is drawn: writing each year a few papers that are published in select journals. In the top tier, failure is drawn close by (but this line does not extend into the other institutions, where members define performance differently):

There are people who just stop publishing and don't do anything to fill the gap because, even though we are university professors, the notion of teaching, which is what we are paid to do, is much more than standing up in front of a classroom. That only is what we do three hours a week. If you do it well, it probably costs you six or seven hours of preparation for each of those one hours, at least the first time you teach a class. But that still leaves twenty or thirty hours a week for research, and so teaching means being interactive with your graduate students and your post-docs. If you stop doing that, and you do nothing but your classroom teaching, then no matter how well you do that classroom teaching, you are a failure. If you assume some other responsibility, then you are acceptable. If you don't, then you are essentially ostracized. Most people here continue to be successful right up until retirement, continue to be productive, thoroughly productive. Being sixty is not really a disability. There are plenty of wonderfully active sixty-year-olds. If you take on a responsibility like getting involved in university administration, that's fine. If you do nothing, you are considered a disappointment, a failure. (Interview No. 23)

Physicists in the top tier describe the moral evolution of careers in ways that highlight gradations of achievement. The expectation is one of continuous productivity, even though there may be intermittent and alternating periods of the fallow and fecund. Within the moral order of the top tier, the person and the career look different at different times:

From graduate school to death, there's a sort of continuum of accomplishment, and what happens to people is that they rise as they age; they rise at different rates and then they stop somewhere. That's probably true for everybody, but they don't come down again. You pretty much have what you have done and then you are settled at some level; you can rise at different rates, and then you check out at different levels. We have here people who are about as successful as you can be. I'd say of the sixty to seventy faculty here, there are about ten . . . who are in their late fifties, early sixties, who are as successful as they can be, except they haven't got the Nobel Prize. So they are the kinds who are members of the National Academy of Sciences, and every year they get their membership to some new club of sorts. They are regarded as the elder statesmen of physics. They are all men; they all sit on national panels, advisory panels, all that sort of stuff; they spend time in Washington. By and large, they do very good research as well. Then there are people who should rise into those positions. Those are the people who are in their forties. Most of them are still at the stage in their lives where they haven't, they can't rest on their laurels; they still have to keep going. The sixty-year-olds are tremendously friendly, and they have us over to dinner, and they make a fuss of our kids, and they are supportive, and they just assume that we are like them—that we, in our early thirties, are just clearly the next generation of them. I do that with undergraduate and graduate students. I just assume that they are also going to have successful careers in physics. I wonder if one is not discerning, I don't know. The ones who are younger are a funny breed. They are quite tough, and they are still a bit competitive, and they are not so easy to live with. They are a bit more argumentative. I guess they are still trying to make their reputations, and so they are not as avuncular as the older people. (Interview No. 23)

The career is thus symbolically divided into age-graded statuses. An image exists of how the career unfolds. This image involves the objective statuses that are part of an evolving sequence of growth and development, in addition to the dispositions and manners that accompany each stage.

Let's start from the end. There's the landing, where you keep your copybook clean. These people that we work with are quite tough. They are the people who are the superheroes, the National Academy and that sort of stuff. They never really retire; even if they officially retire, they are still active physicists in the community, and people perceive them as such; and they get their invitations to talk at international conferences, and then they get to the stage where they are on the advisory committees, so they don't even speak, but they decide who does speak. And then earlier than that, that same bracket of people will typically be tremendously industrious in their late thirties to mid-forties. And so there's the pre-national committee advisory stage where they are making their reputations by doing really beautiful work, and that often involves very deep reflection and frantic work and complete submission to the problem. Everybody accomplishes something at some level and everybody finds his own community or her own community. The question is how rarified is that community. (Interview No. 23)

Constancy of effort and progress, even in advanced career stages and even when successes have been found, constitutes the moral ideal among top tier physicists. In this sense, scientists in the top tier may be viewed as among the most integrated in the moral order of science writ large. To a high degree, they conform to the institutional goals of science—to advance certified knowledge through research and publication (Merton, 1973a).

The grip of these institutional goals, especially among scientists in the top tier, is evident throughout their accounts. The scientist above has been quoted at length, both to show the coherence and clarity of the account he provides of institutional culture and to capture what are the more general trends found in the accounts of the other top tier scientists. The idea of constant progress in research is so central to scientists in the top tier that it is easy to find scientists in this institutional setting speaking of it. It is part of their everyday culture. What is more surprising is the force of its moral grip, even for highly recognized scientists and those who aspire to high recognition. The account below, referencing career norms associated with vaunted prizes, underscores these pervasive patterns:

The people that I aspire to, the ones that I think have been successful are the ones who are more senior than I am who are still moving forward and working on new problems. There are several luminous scientists here at [this institution]. There are two who got Nobel Prizes, society sanctioned success. [They are] still incredibly active in the field, they both got it at the same time. . . . So my model, what I aspire to and what I would consider being a success is if I look back on my life and if at the very end I would still be very interested in trying to understand current problems, learning and participating in that understanding. . . . I would consider myself a success if at each stage and at the end of my time as an active scientist I was still very much involved in everything. (Interview No. 2)

In the top tier, teaching assumes a more peripheral role. It either operates as an appendage to scientists' research programs or is simply marginalized in the spectrum of time and effort scientists allocate to their commitments. A scientist illustrated the cultural logic of the teaching/research relationship in the top tier:

There are certain levels of tolerance. If somebody isn't doing much research and also aren't really good at their teaching effort, that's pretty bad news. I was in charge of the teaching program in the department for the last two years . . . and one of the issues that comes up is who participates, who contributes, who are the good lecturers, who is willing to take on a difficult lecturing job, and who are the ones who just say no, no, no. The ones that are saying no, no, no are real hot shots in the global view, the kind another institution would grab in an instant. You lean on them, but you lean delicately. (Interview No. 3)

The Low Tier

Scientists in the low tier departments operated on terms far different from those in the top tier. These scientists do not conform to any single model of a career, especially in their beliefs but also in their practices. The low tier is marked by a tolerance for varieties of identification with and commitment to science, whether primarily as teachers, researchers, or some combination of the two.

I am very, very happy. I think that I have been able to function primarily in a teaching role. I am not a big researcher. I am able to do some of the type of stuff that I like dabbling around with, and it's not stuff that's going to be in *Physics Review Letters* [sic] or anything like that because it's not breaking news. To me it's like puzzle solving. I've been able to teach and do my little things. (Interview No. 39)

In drawing lines between types of performance, one physicist in a low tier department depicted how "ultimate" achievement is construed. But notice how both the scientist's tone and the actual threshold differ from the tone and threshold of physicists in the top tier:

A lot of people would differ with me on this, but to some people, including some of those in this department, a successful person is one who is aggressive and goes out and gets grants and establishes big groups, writes lots of papers, and is involved in all kinds of activities. That's a successful person. Well, I wouldn't go quite as far as that, because a lot of stuff is just aggrandizement: big grants, makes a big show, looks good, looks impressive and a lot of things running around, a lot of students running around, but I would not necessarily say that was a successful program, unless the work was of some significance. If it's really contributing to an understanding of nature, not just a window-dressing operation, not just, here, we've got a piece of equipment and we can run all this stuff through this equipment and get all kinds of results out and just write paper after paper like a machine or a mill, a factory, a paper factory. (Interview No. 31)

In the following depiction of "minimal" success, notice again the differences in tone and terms that distinguish the low tier department from its top tier counterpart:

Someone has to be at least diligently working in whatever endeavor they are pursuing, it might be teaching or whatever and really trying to improve and all that kind of stuff. Or if they are doing research work, to be not goofing off and playing golf and fooling around like that. Really putting in honest effort, I would say would be the minimum expectation. (Interview No. 31)

The acceptance of wide disparities in performance is, I argue, associated with an occupational subculture in which people, apart from their work, form the basis for respect.

There are some people who do a wonderful job teaching. You cannot do everything perfectly. And so we have some people spending most of their time as excellent teachers. We first respect [people] for who they are. They are all nice people. If they do a very good job at teaching, they are respected, and if they do a very good job at research, they are respected. So they get respected for whatever they do, and some do both. (Interview No. 42)

In the low tier, people come before the work. The basis for respect is "citizenship" and the responsibilities that go with it. Accomplishments beyond local norms—and they can be in one of many but not necessarily all realms (e.g., teaching, research)—"boost" individual legitimacy, but do not feed a sense of collective aspiration or conformity to institutional goals, as was evident in the top tier.

There is an ethic of shared responsibility in the low tier, but unlike in the top counterpart, it is not to research, nor is there a pervasive cultural element in the low tier of constant progress toward satisfying the goals of science. The ethic of shared responsibility is, rather, to teaching, which forms the primary basis of according honor and esteem.

The Middle Tier

The moral order of the middle tier—as the accounts below will testify—represents a hybrid of the top and low poles. Some of the distinctions that characterize the low and top tiers also characterize the middle tier. For instance, the strong identification with teaching common among scientists in the low tier also is found in select scientists in the middle tier:

Someone I admire in the department is named _____. He's someone who did a significant piece of work back in the fifties and really hasn't done anything since. That's why I pick him as an example. If he had aspirations to be a leading theoretician, then they weren't fulfilled. Nevertheless he's an admirable teacher and colleague. He's very happy figuring things out and explaining things. So I would see his career as very successful. He's very admired in the department. (Interview No. 43)

The culture of the middle tier department underscores the plurality of ways in which success may be defined. Teaching and research each represent plausible paths to personal and collective evaluations of career success. Even a teaching career that comes at the expense of research, as was evident in the low tier, is culturally permissible in the middle tier (even though some scientists in this tier might frown upon it, if they have personally adopted a stronger research orientation):

I think there are many ways to be successful. I think one of the most important things for success, for career success—I don't think the most important things for career success are centered around research. I think they are more

centered around teaching, producing good students, Ph.D. students, having an influence on undergraduates. (Interview No. 45)

At the same time, one also is apt to find people whose sense of a science career resembles scientists in the top tier, to the extent that their narratives underscore research:

I think any of the things I've done—all would be successful. If I remained working in environmental technology, I think that's a successful career for a physicist. If I did applied research at an industrial laboratory, that's a successful career. If I was an administrator for the university, that would be a successful career. In carrying out a research program in physics, which is what people more traditionally see as a successful career, that's also successful. (Interview No. 58)

In some cases of scientists in the middle tier, accounts highlight the necessity of conforming to the institutional goals of science, as was especially evident among top tier scientists:

I think [that to have] a successful career in physics, you must remain active in every sense. You must publish, obviously you must have some impact, you must have a clique of others around the world who understand what you're doing and [that you] are in the game. To be unsuccessful is to write papers that no one reads. You can be even less successful and that's never to complete a project or write a paper. (Interview No. 54)

Cultural Classification: Three Worlds

To keep referring to the departments (and the professors in them) by tier would fail to capture the substance of the moral orders that form their cultural logics. Names must be given to the types of schools studied in order to outline a system of cultural classification. The act of naming in itself serves the goal of cultural classification because names can often underscore the logic of codes that guide cultures (cf. Becker, 1982; Lieberman, 2000).

Top tier departments correspond to the academic world best called *elite*. These departments place the highest premium on research. "Elite" uniformly describes the members who work in this world and the external definition of them and their department. It also expresses the aspiration of its members—"to be among the best"—and the key collective goal that brings them together and establishes their membership in universities that are also elite.

Middle tier departments correspond to the academic world best called *pluralist*. This type of department answers to considerably more varied demands, those of mass teaching as well as research and service to the wider community and state. A pluralist department includes some

members as eminent as those found in elite departments, but the pursuit of still more eminence is not what holds members together, nor does it provide a standard that all members unhesitatingly adopt. Given the diversity of audiences to whom this type of department is accountable, pluralist departments need to achieve some balance among staff. Often this results in a blend of people who exhibit radically different affinities, talents, and motivations: plurality thus conveys the essence of this type of world. As a division of labor, departments of this type mirror something of a "multiuniversity" of which they are a part.

Low tier departments correspond to the academic world best called *communitarian*. The most defensible collective grounds for the actions faculty take are local, reflecting responsibility to the institution itself. Like pluralists, they answer to many demands—research, teaching, service, administration—but the fundamental basis of comparative worth is within the institution itself. "Good citizenship" is demanded of all and is a primary basis on which individuals are accorded honor and esteem. All members are expected to shoulder more than one responsibility, and faculty almost never find ways to completely excuse themselves from teaching. Unlike elite and pluralist departments, no special arrangements are made to attract "stars," those people who are known widely by academic and general public audiences. This type of department holds an ethic of shared responsibility.

Of the three academic worlds, the elite is distinguished by the extreme care that scientists gave to discussing careers that pass through it. They normally described, with exacting detail, the moral career that all in the elite world routinely strive to follow. Careers of elites, more so than those of pluralists or communitarians, are institutionalized: there are many socially established and expected phases.

The elite careers are standardized and explicitly hierarchical. Symbolically, they are seen to mature and prosper as they unfold, growing ever more advanced and supreme. People also are cast in successive roles in which they embody mounting worldliness on a path toward eminence. To be sure, elites may not always adhere to the moral career. But they possess an unrivaled conformity in beliefs about what constitutes desired performance and how that performance should evolve over successive phases of life.

In this study, elites were relatively homogeneous in their commitment to and identification with science. All are, and have been throughout their careers, active in research. Most centrally, their commitment and identification is socially controlled by those with whom they work. Those who falter in the course of their careers stand a strong chance of exposing themselves to feelings, if not socially enacted rituals, of

degradation. When individuals fail to comply with minimum group expectations by halting their research altogether, severe social sanctions (not to single out economic sanctions) are likely imposed, including isolation and loss of power. In the elite world, scientists normally work with the assumption that individuals are only as good as their last work.

The reality in which scientists find themselves is different in the other academic worlds (cf. Berger and Luckmann, 1966). The spectrum of commitment and identification broadens as we move into the worlds of pluralists and communitarians. Among communitarians, the commitment to and identification with science is varied and uneven. Scientists in these departments are heterogeneous in their beliefs and practices about what defines a legitimate career. Those who lead essentially teaching careers, or careers in which research has been sporadic over the course of time, are most likely found here. In contrast to the conformity of the elite careers, diversity characterizes the careers that communitarians socially certify as valid. They are accepting or at least tolerant of a wide latitude of scientific commitment. In accounting for the way in which individuals establish legitimacy here, this is a world in which scientists believe that the person comes before the work: individuals are respected on the basis of their human virtues.

The remaining world of science, pluralists, falls in between the other two types. Here one finds scientists whose identification and commitment resemble those of elites alongside scientists whose beliefs and practices are more closely allied with those of communitarians. There is a tolerance for a diversity of practices and engagement with science, but the span of this tolerance is not as permissive as among communitarians (in whom research can be completely abandoned) nor as proscriptive as among elites (in whom an elaborately staged moral career dedicated to research is highly institutionalized).

This classification is posited to apply to multiple levels of academic organization: department and university. Questions, or ones similar to the questions, in Chart 1 have been employed here, and may be used elsewhere to determine the identity—elite, pluralist, or communitarian—of departments. Thus, questions about construal of career success and failure, taken as central to the goals of academic institutions and individuals (Merton, 1973a, 1973b, 1973c), are posed as readily to physicists as to linguists and historians in order to derive patterns of academic life as institutionally constrained.

The identities of departments determine the overarching identity of the university in which they are located. Thus a more general system of classification may be posited. Elite institutions are those that have a majority of elite departments. Pluralist institutions are those that have a mix

of departmental orientations, whether elite, communitarian, or in between. Communitarian institutions are those that have a majority of communitarian departments. All three institutional types contain variety, but the range of variety differs among types: it is narrowest in the elite and communitarian worlds, and widest in the pluralist world.

Boundary Work and Identity

The depiction of a place vis-à-vis its similarities to and differences from other places constitutes a form of boundary work. Boundary work is a process in which individuals or groups actively construct an identity from the distinctions they draw between themselves and others who take part in similar activities. Part of this process involves drawing distinctions in ways that call attention to the more positive or flattering characteristics that individuals attribute to themselves or to the groups to which they belong. By doing so, they depreciate any stigmas that may otherwise be associated with their public identity. Boundary work also acts as a mechanism for groups to exert power over others by highlighting characteristics that uniquely define their position. Though this has been thought to be especially indicative of elites (Bottomore, 1964), it is applicable as well to other groups, including those that make status claims in opposition to elites (for example, racial minorities [Gordon, 1975]).

Pluralists create a moral order through language that testifies to a middle position. What is especially noteworthy in how the pluralist scientists described their institutions, however, is the way in which they constructed their middle standing as an advantage. As one pluralist put it:

The fact is that if you're at [this university] then it's going to be assumed you're second-rate, because this isn't one of the top ten departments. I think we're ranked [outside the top twenty] by *U.S. News & World Report*. But that's okay. That hasn't really bothered me that much. In terms of what I would consider a constraint, no, not at all. If anything, I've had far more opportunity here than I would have had, certainly more than a place like Harvard or M.I.T. If I had been offered a chance to go to Harvard or M.I.T. or Cal Tech over this place, I would have been flattered, loved it. My ego would have loved it. But there is no way I would have gone. I wouldn't have gotten tenure. (Interview No. 45)

Because the thresholds of performance are seen as lower than those for elites, yet not so low as to consider the institution out of the running for major scientific discovery, pluralist scientists view their world as a happy medium. Many of them believe that the same scientific outcomes are achieved in their world without having to experience the onus of expectation that they believe characterizes the academic elite:

[This university] has probably allowed me to mature more quickly than I would have if I had gone to Princeton or the University of Chicago. I think at Princeton or the University of Chicago they expect more in terms of prolific noteworthy work from their young faculty and I would have felt more pressure. I think I would have done exactly the same thing, but I probably would feel like I was about ten years older, because there is more pressure to perform. I think had I done what I did here at one of those universities, I still would have achieved the same outcome, it's just that I didn't feel that I had to do it here to be a success. (Interview No. 46)

Pluralists often juxtapose the conditions of their work with what they perceive to be the inhospitable conditions of more publicly visible and prestigious institutions:

In terms of rankings of universities, you may have seen *U.S. News & World Report*, and this one, according to their list, for whatever it is worth, is somewhere around 20 or 25. But the top ones, they put Cal Tech . . . Harvard, Princeton, places like that. So it's considered very prestigious to be at one of those places. On the other hand, if you go there, most people are miserable, because there is so much pressure to compete, and so many egos trying to show off that it can be unpleasant. So from my point of view, I just didn't like that. . . . There was a job opening at M.I.T. The search was two years ago and many people came to me saying that I was the obvious choice for that job, given the parameters that were put onto it. I considered it very briefly and decided that even if I were to apply and was successful, I don't think I would want to be in that department permanently. There are just too many egos, too many turf battles. At a department like M.I.T., there are many distinguished people and many of them are prima donnas. They assume everything should go their way. They can be difficult to deal with. They also can be difficult at seminars. They each take turns trying to destroy the speaker. They can have a very narrow view on who is worth reading and things like that. From my point of view, I decided that just in terms of living I didn't want to be in that sort of group. (Interview No. 43)

Similar sentiments were conveyed by communitarians. As the physicist quoted below illustrates, elites (and some pluralists) are seen as impediments to, rather than facilitators of, important work:

Looking far ahead, even as a graduate student, I knew that to have the freedom to do what I wanted to do and not have somebody pressure me to do something else, I had to go to a school that was emerging so to speak, where a young assistant professor could in fact establish a research program of his or her own making and not do what the senior faculty wanted them to do. . . . I knew that it had to be a relatively small school. Preferably state-supported. Preferably in the South. I didn't want to get into the kind of rat race which you get into in some of the more prestigious universities. [At those places] you're under too much pressure to go down the roads other people believe are significant and you've got to get research funding or you don't get tenure and you don't get retained. (Interview No. 38)

Another communitarian agreed:

I definitely would not have liked an environment of "cut-throat" and where people are miserable, where people are always unhappy because it's how it goes. I think there are certain types of universities. I think M.I.T. is that way. I guess all the first-grade or first-order universities in general tend to be that way. And maybe this is why I didn't go as a graduate student [to these types of institutions]. I applied to some universities, like Yale and Princeton, and got accepted, quite a few, but in the end I really preferred to be in an environment where you can work and study, but also be happy and not necessarily have to be miserable. . . . I like a friendly environment. I like to love to come to work. I've been with people who have gone to these universities and these people are dishonest, they are cut-throat, they will do anything to get something, their value system is totally different from mine. They are a different breed the way I look at it. I didn't want to be one of those people. If you are in an environment like that, you may have to become like that. (Interview No. 42)

The manner in which pluralists and communitarians describe elites is altogether different from how elites describe themselves. Our initial informant described the people with whom he works, and the environment in which they do science, as prized resources. The reality of the elite world is constructed differently by members and nonmembers. For members, it is to one's intellectual and scientific advantage to work in the presence of those who may be taken by nonmembers to be overly competitive and egoistical. An elite put these distinctions in context:

There are two simple reasons you want to be at a place like [this one]. One is that your colleagues are good and you can talk. . . . when I go to ask my colleagues questions I get good answers, because my colleagues are knowledgeable. And then you have good students and you have good post-docs, so it's only to my benefit to be at a good school, because I'm going to benefit from the people around me. And it also means that there's a steady stream of good speakers coming through the area who want to come here and talk about their ideas. I would have to say that I've had every opportunity, given my position, to do whatever I wanted, because I'm at a good place, with good people around me, with good speakers coming through. I think if I was at the University of Kansas I would be higher on the pecking order. Probably at most other first-rate physics schools I would be in the middle. I'm not interested in being at the top. I'd much rather have colleagues who know more than I do. (Interview No. 6)

Although pluralists see advantages in their position, they realize it is not without its costs. They deal with stigma (or at least a comparative lack of prestige), in part by the ways that have been described in the accounts above. They also deal with a set of structural constraints that affects their interpretation of local culture. Pluralists often raised the subject of students:

My biggest complaint I guess is the lack of good students. I have a couple of students. One of them will probably do okay, and the other will be a real struggle. In contrast to other places where you can give a student a problem and they will just take off and work with it, I basically feel that I have to explain many times until they get it as opposed to just mentioning to somebody, "oh you should read about this" and having them come back and explain it to me. It slows things down. My game plan was to put this [part of a project] in a student's lap, and I estimated how long it would have taken me as a graduate student and doubled it. It turns out that doubling it is not enough. It's more like a factor of six or something. (Interview No. 43)

Comments such as the one above were frequently voiced among pluralists and communitarians, including the two pluralists below:

Of course you want to go to the Ivy League so that you have better people, better students. Ivy League is better, but that's alright. We will do the best here. (Interview No. 44)

The main disadvantage of being at an obscure university like this one is that the students are on the whole not as good. For instance at the Ecole Normale in Paris, where you have highly selected students, about one in a thousand, you notice the difference. They are extremely quick. They are very challenging to work with. The sort of student you get here is not so quick and not so stimulating. That's I think the key difference. It's the quality of students. (Interview No. 53)

The worlds in which faculty work present meaningful distinctions in how careers transpire within them, and how in turn they are experienced, understood, and interpreted. The cultural classification proposed herein has sought to capture those distinctions, which have remained obscured in existing structural schemes. Comparison of selected dominant schemes underscores the point. In Chart 2, the six schools whose physics departments were sampled in this work are listed with the corresponding classifications designated to them by the 1994 and 2000 Carnegie Reports (among the most widely used classification systems) as well as the designations made through the more cultural, qualitative work of this study.

CHART 2
Comparison of Institutional Classification

Institution	1994 Carnegie Classification	2000 Carnegie Classification	Cultural Classification
School 1	Research I	Doctoral-Research—Extensive	Elite
School 2	Research I	Doctoral-Research—Extensive	Elite
School 3	Research I	Doctoral-Research—Extensive	Pluralist
School 4	Doctoral I	Doctoral-Research—Extensive	Communitarian
School 5	Doctoral I	Doctoral-Research—Extensive	Communitarian
School 6	Doctoral II	Doctoral-Research—Intensive	Communitarian

This article has sought to demonstrate how, in constituting distinct social worlds, departments (and the institutions in which they are housed) often can be "worlds apart." The names given to these worlds seek to underscore the cultural logics operating within them, conveying "what life is like" on the inside as careers develop and unfold in the context of a distinct moral order. Prevailing structural schemes mask these distinctions so that the announced identities of institutions appear more similar in the midst of significant difference. The 1994 Carnegie Classification makes the schools in question look highly alike, with only subtle differences to be found in the principal measure undergirding the classification: kind of highest degree conferred and its percentage of all conferred degrees. The 2000 Carnegie Classification conceals distinctions even further. Three sets of highly different institutions appear essentially the same. Thus, the utility of a cultural classification system is to be found in its capacity to capture those distinctions that meaningfully locate academic worlds of work in the practices, beliefs, and values of those who inhabit and seek to make their careers in them. This means of classification more ably conveys the substance of faculty work life, together with the departments and institutions that organize it, than do existing structural schemes.

Conclusion: The System of Academic Worlds

The groups that make up the three academic worlds of science display distinct moral orders that orient and guide ways of knowing and behaving. I have described these moral orders on the basis of physicists' conceptions of success and failure, and what commitments to and identifications with science facilitate or impede that success. We have seen how the worlds fall into a spectrum that widens as we move out from elites and in from communitarians. In looking out over this distance, we see progressive changes. People become more heterogeneous in their commitments and self-identities. They become increasingly tolerant of different careers, if only because variety is the norm of their world. These differences are more broadly conceived in terms of expectations. Each group creates its own meaning of achievement, extraordinary achievement, and lack of achievement. Success and failure in one world does not directly correspond to the same success or the same failure in another.

Worlds differ on an additional count. Only in one world, that of the academic elite, do we find people who clearly articulate a uniform moral career. The career and the person undergo successive changes; they bear different images at different phases. It is a world in which success is seen in terms of vertical mobility.

The same is only partially true in pluralist and communitarian worlds, which contain multiple and competing systems of reward. The career, nowhere near as institutionalized as it is among elites, takes on various forms. Phases of the career and the person are only nebulously conceived. Where careers revolve around teaching, the life course is relatively unstaged (Lortie, 1975).

The cultural classification of academe may be conceived as a continuum of three overlapping spheres, each sphere representing one of the academic worlds. The Venn diagram in Figure 1 represents this cultural order.

As reflected in the diagram, the worlds are not discrete. In contrast to structurally based classification systems, this cultural classification does not impose artificial boundaries between institutional types. Following the social world perspective adopted in this work, the boundaries between types are drawn where collectivities of people draw them. Thus, the worlds penetrate each other's boundaries. Sets of cultural conditions characterize each of the worlds, but in degrees these conditions bleed into other worlds.

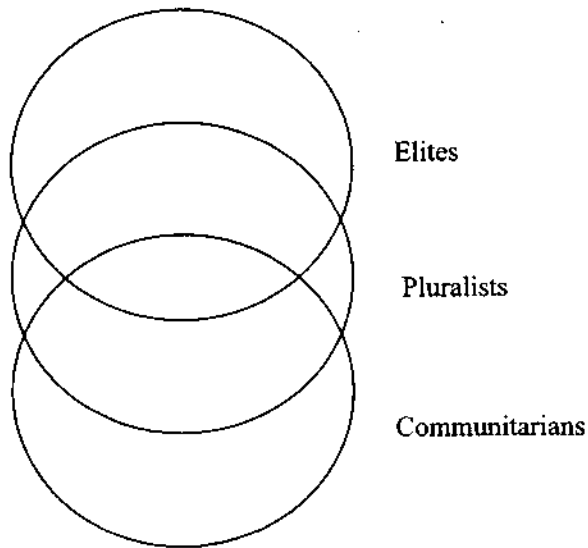


FIG. 1. Cultural Continuum of Academic Worlds

The diagram shows that pluralists, as described above, constitute a hybrid of elites and communitarians. In this world we find individuals whose careers resemble those of elites or communitarians or something in between. At either end of the spectrum are polar types of worlds and of people who belong to them. On the elite end are the institutions and individuals who are the most devoted to research. On the communitarian end are the institutions and individuals who are the most dedicated to teaching.

While the central cores of the elite and communitarian worlds are furthest apart, the boundaries of the worlds overlap. This overlap depicts the fact that in the elite sphere there are conceivably institutions and individuals who gravitate toward the communitarian type while in the communitarian sphere there are institutions and individuals who conceivably gravitate toward the elite type. On the individual level, such professors exist as communitarians in an elite world and/or elites in a communitarian world.

Elite, pluralist, and communitarian worlds are *distinct* for their central tendencies, discussed throughout this article. The worlds are *similar*, and thus overlap, because at a general level they are each engaged in shared activities and shared purposes. They are all universities, and they are therefore bound to have characteristics common to them. By way of analogy, the worlds may separately represent apples, oranges, and pears, but in each case we are looking at fruit. In fundamental ways the fruits differ (in color, size, taste, texture). But they also share characteristics (they all have seeds), as one would reasonably expect among members of a single family—or social institution.

Structural systems of institutional classification include or leave room for the inclusion of all departments and/or schools that comprise the population of academe. The cultural system of classification presented here does so too. In principle, all departments and/or institutions can be placed along the elite-communitarian continuum. According to this scheme, finding the exact location of a specific institution is a matter of asking its members about collective definitions of success and failure in their professional roles, thereby establishing a basis on which to assess "what life is like" in various schools.

What is more, departments, institutions, and individuals can move along the continuum within their respective worlds. Departments (such as sociology at the University of Washington) can become more elite while others change status in other directions or drop off the continuum altogether (such as sociology at Washington University in St. Louis). The same is true for institutions (such as Stanford, whose "eliteness" has developed and intensified over the last quarter-century). Likewise for

individuals, who may accelerate in their careers, becoming elites in a communitarian world or "ultra elites" (Zuckerman, 1977) in an elite world. Or individuals may decelerate in their careers, becoming communitarians in an elite or pluralist world. This means of conceptualizing the academic system strives to identify substantive distinctions among the objects classified while at the same recognizing that those objects share characteristics that at times blend with one another.

The cultural means of classifying universities and departments described here has been based on individuals' conceptions of their and others' institutionally constrained careers. Conceptions of career success and failure have been operationalized through a generic list of questions (Chart 1) that have been posed to physicists but may just as readily be posed to members of other fields.

A prior line of work suggests that fields may vary in how members define success and failure (Braxton & Hargens, 1996; Hargens 1988; Hargens & Hagstrom, 1982). This line of work has investigated the level of consensus and/or paradigmatic development in fields, which shape how members of given disciplines define accepted theories for phenomena, the importance of specified problems for research, and appropriate methods for conducting research, among other conventions that characterize fields. Among the principal findings in this literature is that low-consensus fields (such as English and sociology) may use more particularistic criteria in awarding recognition than do high-consensus fields (such as physics and chemistry), where criteria used in awarding recognition may be more universalistic (Beyer, 1978; Hargens, 1988, 1990; Zuckerman & Merton, 1971; Pfeffer & Strehl, 1977). If these premises are true, then in fields where one finds success defined more universalistically (and thus more strictly), one will be more apt to find a smaller elite. Correspondingly, in fields where one finds success defined more particularistically (and thus more loosely), one will be more apt to find a larger elite. Where the criteria for success are established more liberally, more people can satisfy them (even though, among the elite, some of the people in that category may disagree whether others are bona fide members).

Regardless of whether fields use more universalistic or more particularistic criteria in defining success and failure, the institutionalized drive for recognition ultimately exists as the common denominator among all fields. This is true, according to Merton (1973a, 1973b, 1973c), in order to satisfy the institutional goals of higher education—to extend and transmit certified knowledge, whether through research, teaching, or service. As we have seen, and as other work has documented (Baldwin, 1990; Bentley & Blackburn, 1990; Blackburn & Lawrence, 1995; Braxton, 1983; Colbeck, 1998; Lawrence & Blackburn, 1985; Massy &

Wilger, 1995), institutions and individuals vary in the internalization and enactment of this drive, in part as a function of the institutional cultures whose similarities and differences have been classified herein. By this view, there do not seem to be strong reasons to limit the generalizations of this study to physicists or even to physical scientists. While the size of social worlds may vary by field, the *existence* of the worlds is likely found in all of them. Systems of reward and sanction that generally characterize the academic profession extend across disciplinary boundaries, however intensely the drive for recognition is felt in particular individuals or institutions. Conceptions of career success and failure are socially generated and made meaningful only as a result of collective understandings. The findings presented here suggest that those understandings—whether in physics or psychology—will typically be elite, pluralist, or communitarian (or representative of some other point across the spectrum). The result is a way to understand the collective character of departments and the larger institutions, located across the cultural continuum of academe, in which they are assembled.

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