

6. IN THE SHADOWS OF GIANTS: IDENTITY AND INSTITUTION BUILDING IN THE AMERICAN ACADEMIC PROFESSION

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Sociologists have offered two major clusters of ways in which to view professions. The classic cluster consists of delineating the traits that occupational groups possess that situate them along a professional continuum (Greenwood, 1957; Marshall, 1939; Parsons, 1949). Such traits typically include restricted access, protracted training, certification, esoteric knowledge, and self-regulation. Some studies have examined how permutations in these characteristics stratify professional communities (for example, Heinz & Laumann, 1982, in the case of law; Freidson, 1970a, in the case of medicine).

The more contemporary cluster, emerging and developing out of the political climate of the 1960s, emphasized not the functional requirements of the earlier view, but the power embedded in the institutional relations between professions and patrons. Whether it was a story of "needs" professions imposed on clients (e.g. Johnson, 1972), of market organizations extolling intellectual domination (e.g. Larson, 1978), or of the consequences that these arrangements have on the actual work that workers do (e.g. Freidson, 1970b), professions were understood not by their form but by their orchestrated outcomes. Abbott's (1988) ecological perspective expanded this collective view, observing how professions exist and evolve on planes of jurisdictional disputes.

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In looking at both classic and contemporary views of professions, however, a major piece of the picture has been left out: the people behind the work. Looking across the professions field, we have developed little sense of what professional work *means* to its practitioners, with how a profession is constructed through experience and its interpretation, or with how these meanings and interpretations change in conjunction with the trajectories and turning points of a professional career.

In this article, I seek to fill part of the "people void" in professions research by putting forth a view that emphasizes the organizational context in which workers work. *I take the American academic profession as a case to explore how varying social contexts of work – here, the different types of universities that employ academics – set parameters on how the professional life course is subjectively experienced, interpreted, and presented.* I will attempt to demonstrate how this view enables us to conceptualize professions in a different way: professions may be understood not in terms of deduced traits or power relations but in terms of socially organized accounts (Orbuch, 1997; Scott & Lyman, 1968), or narratives, that build and communicate identity, both individual and institutional.

The present work is explicitly based and builds upon previous work on the topic (see Hermanowicz, 1998). It seeks to extend the previous research in two explicit ways, the first empirical, the second theoretical. First, based on the data in hand, it delineates typical career paths of academics, along with their defining characteristics. Second, using the career patterns identified, the work suggests a different way in which to view how identities get built at both individual and institutional levels – through the organizationally constrained, "real-life" accounts of careers.

This paper has four parts. First, I discuss ambition as a way to frame the study of professionals and professions. I emphasize the need to study ambition sociologically by locating it and how it evolves within the times and places of which professionals are a part. Second, I describe the design and method of the study. Third, I present findings in how ambition figures and gets described in careers followed by three groups of academics. Finally, based upon the findings, I present and develop a way in which to view professions: as organized sets of narratives possessing "master" forms that correspond to the organizational worlds in which professionals work.

AMBITION AS IDENTITY FRAME

The very traits that mark professions render them the most difficult to enter and, once in, the most difficult in which to succeed at progressive levels (Goode,

1978). This social fact points us to one dominant characteristic that situates how and why professional careers begin and transpire and how professional work is experienced within the context in which it is performed: ambition. As the term is often used throughout culture and as it will be used here, ambition refers to a strong will to accomplish (Epstein, 1980; Spenner & Featherman, 1978). Taken as a master component of professional entry and subsequent success among incumbents, ambition offers itself as a key to understanding how the work-lives of professionals are oriented and unfold.

It should be understood that not all professional aspirants or incumbents have ambition in the same degrees or in the same forms, but they all have come to possess (whether or not they still possess it) a desire for success in lines and at levels of work assigned high social esteem. Moreover, while ambition may be taken as a master component of professionals, it clearly may not be the only attribute that facilitates their attainment. Ambition may operate with other characteristics, such as ability or skill or economic resources, to produce observable outcomes. The point is that the odds of entry and continued success in professions render ambition more central than other, interacting ingredients: people may be skilled or resource-rich, but without passion are unlikely to find themselves moving in and up a bonafide profession.

The story of modern professionals, then, becomes an analysis of ambition and its own life course in the work sphere. Ambition thus is the major point of departure and theoretic interest, for to see it and its chronology is to see how contemporary professionals construct, experience, and interpret their passage in the world of work.

As a concept, though, ambition has received little systematic treatment. People can be confused as to whether it is "good" or "bad," indicative of ill intent or a robust life (Epstein, 1980). Even Aristotle was so mystified by the concept of a will to achieve that he could not resolve what to call it. In fact he used "ambition" and "lack of ambition" to refer to the extremes of the very characteristic that he claimed was desired. A healthy striving mediated by the polar excesses of grandiosity and indolence is what Aristotle ultimately called the "nameless virtue."¹

Merton's explanation of the institutionalized drive for recognition similarly underscores virtuosity rather than vice in the motivation to achieve (Merton, 1973a). Recognition from people who are competent to judge a contribution, whatever the field or endeavor, is the prime indicator that one's work in that field has contributed to its advancement. The quest for recognition is compatible with, indeed satisfies, institutional goals, so long as in practice, people remain bound to ethical guidelines undergirding work in their given occupational arena. Ambition for great attainment is thus both expectable and

essential to lines of work whose members are ultimately judged by originality, invention, or heroic achievement. Professionals, from astronauts to athletes, compose this segment of labor.

The inattention to ambition is especially remarkable for societies that attach high value to success, variously defined. In what follows, I deal with this absence by posing time and place as two dimensions on which to examine how ambition figures in the way professionals and professions get constructed. These dimensions are adopted to treat ambition not merely as an individual characteristic, unbounded by the groups of which people are an interactive part. Rather, following the Chicago School insistence that social phenomena have a temporal and spatial locatedness outside of which they cannot be properly understood (Abbott, 1997), ambition is here conceived as a relational phenomenon that is socially situated in the context of work. It matures, thrives, fluctuates, and dies in and as a result of contexts. Professionals and professions do the same, in accord with ambition's life course. The deeper rationale and significance of employing these dimensions is the subject to which I now turn.

People in Time

Studies of the life course have offered theoretic frameworks in which to study the formation and unfolding of occupational self-identity. Of particular importance is Daniel J. Levinson's (1978) major study, *The Seasons of a Man's Life*. Levinson's work established the idea of a "dream," akin in many ways to ambition, as a vehicle for understanding how people organize their passage through life. Levinson drew on the life histories of forty men, between the ages of thirty-five and forty-five, who were employed as business executives, university biologists, novelists, and hourly workers in industry (see also the companion volume, *The Seasons of a Woman's Life* [Levinson, 1996]). Levinson put forward a stage theory of adult development in which aging could be viewed as a process that involved periods of "structure building" and "structure changing." In this perspective, the life course consists of a series of alternating stable and transitional periods that shape adult development and conceptions of self. According to Levinson, a life "dream" emerges between the ages of about seventeen and thirty and represents the key concept around which lives are organized and from which individuals derive a sense of evolving self-identity. The dream, most often rooted in one's occupational life, has the quality of a vision, an imagined possibility of self that generates excitement and vitality. In young adulthood the dream may be poorly articulated and only tenuously connected to reality. For example, it may take a dramatic form as in the myth of hero: "a great artist, business tycoon, athletic or intellectual superstar

performing magnificent feats and receiving special honors" (Levinson, 1978, p. 91). In early career stages, people face the developmental task of giving the dream greater definition and finding ways to live it out. As useful as Levinson's perspective is for our present concerns, it also bears significant shortcomings. The perspective is *ahistorical*; it does not consider how past experiences shape individuals. Like other "stage theories" of aging (for example, Erikson, 1950), Levinson's approach to adult development takes a "cohort-centric" view of socialization (Riley, Foner & Waring, 1988). People are studied outside of the socially contingent circumstances that uniquely shape and characterize them and their life courses (for example, Super, 1957). The ways in which self-identities form and unfold are, however, subject to events and experiences that arise in unique periods of time and that vary from individual to individual. Shared events and experiences lead to the idea of a cohort or generation whose members are characterized by defining moments or periods that morally set them apart from those who have passed before and from those who are yet to pass (Mannheim, 1952; Ryder, 1965).

In the case study to be presented shortly, I will also use cohorts, which will allow for a more complete account of how people's self-identities arise in light of varying social experiences related to age and maturation. I will use cohorts to draw distinctions in how the young, old, and middle-aged craft self-identities and perspectives on their careers, perspectives that differ systematically from one another. This use of cohorts draws attention to the sociocultural meanings that people assign to their careers given their age and past experience (Neugarten, 1979; Neugarten & Danan, 1973; Wells & Stryker, 1988).

People in Place

Studies of the life course have been less informative about how self-identities arise in specific contexts of work. Levinson used life histories of people from occupational groups, but the people were studied as if they were detached from these groups. Studies of adult development have sought to derive universally experienced stages, defined by periods of innate challenge or "crisis" (for example, see Baltes, 1979; Erikson, 1950, 1959, 1982; Levinson, 1978, 1996; Sheehy, 1976). They have been less attentive to how self-identity emerges out of the particular settings in which people work.

In an important article, Dale Dannefer (1984a) sparked debate by proposing that the study of adult development was in need of theoretic reformulation (see also Baltes and Nesselroade [1984] and Dannefer [1984b]). Dannefer argued that the prevailing mode of studying the life course – the ontogenetic model – "is not an appropriate foundation for its subject matter because it tends to treat

the individual as a self-contained entity and fails to recognize the profoundly interactive nature of self-society relations and the complexity and variability of social environments" (Dannefer, 1984a, p. 100). One must indeed question a mode of inquiry that leads to such invariance in adult development and socialization, a mode most readily apparent in stage theories of aging (Erikson, 1950; Levinson, 1978, 1996).

The alternative is a sociogenic approach (Dannefer, 1984a), which grounds the study of adult development in the highly variable and contingent social contexts of which people are a part. By placing people in their social contexts, we elevate the study of development by addressing how development may be different among people as a result of their exposure to various opportunities, constraints, and turning points.

For academics, we are led, therefore, to the social contexts in which academic work is done, in which academic lives are led. The literature in the sociology of science speaks most directly about academe and represents the largest systematic body of cumulative knowledge on the profession. A heavy stream of research that has examined the nature of stratification in science is most germane to the present purpose because these studies, like this work, examine different contexts of academic practice (Allison, Long & Krauze, 1982; Allison & Stewart, 1974; Cole, 1970; Cole & Cole, 1967, 1973; Crane, 1965, 1969, 1970; Fox, 1985; Gaston, 1978; Hagstrom, 1971; Hargens, 1969; Hargens & Hagstrom, 1967; Long, 1978; Long, Allison & McGinnis, 1979; Long & McGinnis, 1981; Reskin, 1977, 1979; Zuckerman, 1970, 1977).

As much as these studies have told us about the process of stratification in science, we know remarkably little about the details of "what life is like" on the inside. Most of the stratification research has been undertaken with cross-sectional surveys, which, though possessing the virtue of breadth, fail to provide a picture of the finer-grained cultural dynamics at play in any given setting where academic work is done. The stratification research has been almost exclusively quantitative, often seeking statistical models to predict measurable outcomes in careers, outcomes such as publication productivity and citation rates. In addition this literature, and the larger family to which it belongs, have largely bypassed issues of "self" and identity.

DESIGN AND METHOD

This work is based on a national study of academics – physicists specifically – who work in a variety of universities that may be classified into three types for comparative purposes: *elite* – universities that place the highest premium on research (such as Cal Tech and Harvard) and whose departments of physics

ranked at or near the *top* of the assessment conducted by the National Research Council (NRC) (Jones, Lindzey & Coggeshall, 1982; Goldberger, Maher & Flattau, 1995); *pluralist* – universities that emphasize research as well as mass teaching and service (most often large state universities such as Colorado and Michigan State) and whose departments of physics ranked in the *middle* of the NRC assessment; and *communitarian* – universities that primarily emphasize teaching and service but not necessarily at the exclusion of research (such as Mississippi and Nevada-Reno) and whose departments of physics ranked at or near the *tail* or the NRC assessment.² This differentiating scheme of universities and their departments has been used in previous research (Hermanowicz, 1998), and is re-employed here for its explanatory utility.

Top, middle, and tail departments were built into the study design to permit comparison of scientific careers that are experienced under different structural and cultural conditions – the prevailing resources and expectations that situate and help define each of these types of schools and the careers found in them. Eighty-seven percent of the scientists in the study have worked only at their present institutions; thus changes in career, identity, and ambition 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 identity and career experience.

The orientations that people bring to their work are both structurally and culturally constrained. Differences in the social structures of institutions make opportunities more available to some than to others (Crane, 1965; Long, 1978; Long & McGinnis, 1981), a fact that is reflected in scientists' appraisals of their own successes and failures. People who see themselves "at the top" in one environment may see themselves in the middle or near the bottom in others because the people in these places work according to different performance norms.

The cultural and structural differences among types of schools lend to their being portrayed as distinct *social worlds* (cf. Becker, 1982). Entering each of the worlds – elite, pluralist, or communitarian – is much like entering different parts of the world at large. In some respects the worlds resemble one another. In each of them one finds people involved in similar activities, using similar talents. But in other respects the worlds differ systematically from one another. A scientist who subscribes to the expectations of one world would feel like – and be viewed as – an outsider in a world far removed.

In addition, the study design involved a sampling of scientists of three distinct cohorts, which would permit an assessment of careers among scientists of different ages and hence different lengths and types of experiences in the profession. The cohorts were defined by those who received their Ph.Ds prior to 1970;

Table 1. Number of Scientists, by Type of Academic Institution and Cohort.

Institution	Pre-1970	1970-1980	Post-1980	Total
Elite				
School 1	8	6	6	20
School 2	1	—	2	3
Pluralist				
School 1	6	5	7	18
Communitarian				
School 1	3	3	3	9
School 2	3	2	2	7
School 3	1	—	2	3
Total	22	16	22	60

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those who received their Ph.Ds between 1970 and 1980; and those who received their Ph.Ds after 1980. A total of sixty physicists were included in the study. Roughly equal numbers of scientists (around 20) were selected randomly by cohort and institutional type; the institutions themselves were selected for their ability to capture as many scientists as possible to fill the "cells" of the research design. Two schools comprise the elite, one the pluralist, and three the communitarian (which tend to have the smallest departments). A summary of the research design and the distribution of respondents by institution and cohort is presented in Table 1.

All of the scientists were asked a set of questions about their professional biography and how they have experienced their careers. The interview protocol was divided into six parts, each dealing with social-psychological aspects of career experience, including: location in the division of scientific labor; past aspirations; present aspirations; generalized definitions of success and failure; ambition; and self-doubt about work. Under assurances of individual and institutional anonymity, the interviews were conducted in person by the author at the scientists' offices; they averaged ninety minutes in length; all were tape-recorded and transcribed.

THE LIFE COURSES OF AMBITION

In a comparative study of orchestra musicians and hockey players, Robert Faulkner (1974) observed a set of behaviors associated with professional socialization, including adaptation to failure, wherein professional members

realize their dim chances of "making it big." Noting patterns of adjustment as applicable to musicians and athletes as to other high-aspiring occupational groups, Faulkner generalized that "[a] predominant theme in the literature on socialization presents life as movement from youthful idealism to more or less realistic mobility motivations, more or less contented adjustments which progressively confine behavioral potentialities and imputed identities within an acceptable range and to which an individual becomes committed" (Faulkner, 1974, p. 136).

The achievement ambitions of scientists can similarly be seen to become more "realistic" over time and across settings, suggesting the broad applicability of this trend. At the same time, however, this generalization hides key differences in the development of self and career. The achievement ambitions of the scientists proceeded to unfold in systematically distinct and often dramatically different ways. "Cooling-out" (Goffman, 1952) can be seen as the core concept to describe this process, but again, the outcomes of being cooled present significant differences across contexts. Building on life course research, our task is to locate people and their ambitions in time and place, and hence within the opportunities and constraints that their work cultures and structures present.

Communitarians

The starkest changes in outlooks on self and career are seen in communitarians. The academic world that they entered presented sharp contrasts to the worlds that they had known as graduate students. This new world was, for most, one they had never known. Table 2 lists the graduate schools the scientists attended. Some communitarians had come from the elite. Many had come from pluralist schools, where the research programs often approximate those of the elite. Like several other scientists, the one quoted below – sixty years old – spent his graduate career at a major research institution with an illustrious history in physics, the University of California at Berkeley.

I thought I could maybe make some nice discoveries, but I had realized early on that the probability of making a major discovery like Einstein or Newton, those kinds of major discoveries, would probably be completely out of my grasp, reality being what it is. But I thought maybe with some luck (a lot of interesting results come out of just pure luck), [I could], if I stumble around and find something that hasn't been observed before. I thought, well, there is always a reasonable chance that I might be able to find some new thing. I realize that's not going to be possible for me to do, to accomplish much more than I already have, considering the rate at which I've made progress. Over the time that I've got left to do productive work, the chances are I won't really make any major or even minor discoveries. I think that if one has limited talents, then you are going to make rather limited contributions. I think now that my contributions will be rather limited. I can look back and see what opportunities slipped through my fingers.³

Table 2. Graduate Institutions of Scientists, by Current Institutional Identity.

Elites (N = 23)	Pluralists (N = 18)	Communitarians (N = 19)
Berkeley	Berkeley	Arkansas
Birmingham	Chicago	Berkeley (2)
Bombay	Columbia	Cal Tech
Cal Tech (2)	Cornell	Colorado
Chicago (2)	Harvard (3)	CUNY (2)
Cornell	Illinois (3)	Georgia
Harvard (2)	Indiana	Iowa State
Landau Institute	Johns Hopkins	Louisiana State
London	Maryland	Minnesota
Milan	M.I.T. (2)	Missouri
M.I.T. (5)	Oxford	Nebraska
Minnesota	Pennsylvania	NYU
Northwestern	Purdue	Syracuse
Pennsylvania		Tokyo
Princeton		Wisconsin
William & Mary		Wroclaw
		Virginia

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Structural constraints imposed by the communitarian world were evident in how people viewed the reaches of their involvement and impact in the field. Constraints took many forms but were always thought to place limits on how far one could go. They included lack of equipment, small department size, a low density of expert colleagues in specialty areas, low graduate student enrollments, limited research assistance and funding, and less access to mainstream journals. To speak of structural constraints, then, is to speak of what opportunity looks like for those on the inside.

I've always been kind of a lone wolf-type person; I haven't had many collaborators. I've worked with students and post-docs, people like that, but I haven't really collaborated with the big dogs in the field. [If I had], obviously it would have made my contributions greater, because I would have been working with people that had more resources. I could have contributed more that way, simply by joining in a bigger effort. It would have probably enhanced my reputation because I would have been associated with people that [other] people would know more about. Just to be in the swim, so to speak, being associated with these other groups.⁴

For some of the scientists, the communitarian world is paralyzing. Expectations are completely dashed. Their professional life bears no resemblance to what they had earlier envisioned. What was previously viewed as professional work now

seems more like a "job." In ways unique to communitarians, scientists were sometimes cooled-out to the point that they froze professionally. In neither of the other two worlds do we find an account of a career that has basically come to a halt. In such a career, only the bare requirements of the academic role — coming to class to teach — are met, and then only with some reservation.

One [guy] looks upon his work here as sort of a job. He has a lot of outside interests and it's not much different than putting in your time as a bank manager. I think when he was younger he had hoped to have a career involving both teaching and research, and he found it difficult to continue his research. It was probably [because] he didn't have sufficient interest in his research in order to persevere in a department where you are very much on your own. We didn't have good machine-shop facilities; we didn't have technical help, and so you really had to do just about everything on your own, and it was not easy. If you were at, say, Harvard or Yale, you would have a lot of support; your teaching duties would be lighter. So it was extremely difficult. He just didn't want to put in the level of effort required. He was not promoted to full professor; he remained an associate professor.⁵

Even those who did not enter the communitarian world with an elite school background, or with the grand hopes that such a background normally inculcates, had to make adjustments in outlook. As pragmatic as some of their initial aspirations were, many communitarians found that their world could not satisfy their goals or interests.

I had a pretty good idea what I wanted to be doing twenty years down the road, ten years down the road. I was envisioning developing a relatively strong working group. If I could bring in people who could support me and what I was trying to do, and I could interact with them, we could have a pretty good working group in, say, astrophysics, stellar evolution, or in nuclear astrophysics. Initially it looked very promising. [but it never came to pass]. So my aspirations were blunted at a relatively early stage. Within the first five or six years I could see that nothing was going to really be fulfilled and promises were not going to be kept. I wanted to be doing research, I really wanted the research to work extremely well, as most researchers do. I would say that my aspirations haven't been fulfilled at all. To that degree it's been very unsatisfactory in my mind. It's been very unrewarding. My professional development has been somewhat thwarted. I'm not doing today what I had expected I would be doing. And so you learn to release those kinds of fantasies and deal with reality and take what's given to you. You make the very best you can out of it.⁶

Work contexts can clearly be observed for how they condition the way in which people come to understand the course they have followed. Following Mead (1932), self-identities are not fixed in time but are routinely revised through a process in which individuals, at any given point, account for the past in light of a desired future. To gain the fullest perspective on self, career, and ambition, therefore, we need to examine not only the scientists' conceptions of where they have been and how they have arrived to where we presently find them but also their conceptions of where they see themselves going professionally, with how they conceive of a *future self*.

Communitarians' images of their future selves capture a measure of growth in early phases and then level off. In the early phases of their careers, young scientists have yet to hold secure positions, and their more romantic dreams are still being cooled. The future selves in these phases differ the most from how people see themselves in the present. Following these phases, individuals often appear to lose momentum. Communitarians are quicker than elites or pluralists to realize that they have gone as far as they will ever go. This is made possible by the relative lack of social control in middle and late life-phases in the communitarian world. The most pressing social control applies to the master role of teaching: failure to satisfy assigned duties brings sharp reprimand, but "failure" in other domains is tolerable.

The most striking changes in outlook among communitarians are thus found in the middle and older cohorts. As communitarians age, their interest in science wanes significantly. The scientist quoted below, age 60, illustrates this trend.

Studying physics hasn't really moved me much further here from where I started, meaning that what drew me into physics at first, I thought well, there are a lot of interesting secrets in nature that could be discovered and that this would give me a much better understanding of the world around me and all that kind of stuff. But I find now that physics has not provided those answers or that satisfaction, and I don't think it ever will. One has to question, what's really the point of it? I might decide that I don't want to be active in the day-to-day research program, rushing down to the lab, putting this together and that together, and so on. Cranking out results. I guess I'll probably give up doing that. I'm not sure exactly what I will do really, to tell you the truth. I might get interested in peripheral things. I find computers kind of fascinating; that's something that I didn't have any exposure to while I was a student; it's all new. And I may find something else that interests me, but it probably won't be what I've been doing for the last twenty-five years or so. It will probably be something different.⁷

Leaving science altogether after a long career is, of course, viewed by the science community as a legitimate exit. For the majority, a "cold" exit is the norm (National Research Council, 1991). But a phenomenon found primarily among communitarians is that of getting stuck. For many, science fails to take them where they had once hoped to go. Getting stuck brings about ambivalence. A sixty-two-year-old scientist illustrates this pattern. *What do you dream about now in terms of your career?*

That's a problem. That's a problem. I don't know. I just don't know what I'm going to do. I don't know. I can see ultimately stepping down [from teaching], so I think my self-identification as a physicist is rather complete. I read, I play tennis, I bike, I do other kinds of exercise thing . . . I'd like to get another idea. You have maybe one or two ideas in your life, if you're lucky.

How would you describe the period that you are in now?

Approaching fallowness again. I don't like it; I don't have any ideas. Maybe what I probably ought to do is either take a leave of absence or retire or a very long sabbatical – maybe a combination of a leave of absence and a sabbatical and go somewhere else and try to learn something else. I don't know if I'm smart enough to work on this [experimental work] because I don't think I have the energy to do experimental work anymore. That requires an enormous amount of energy and enthusiasm – to get an experiment to work.⁸

Entrepreneurial interests often accompany getting stuck. Such interests sometimes involve ventures that would remove scientists from their roles as professors, as the scientist above makes clear. In many instances a scientist's technical training is not applicable to the new venture (for example, opening up a bookstore, playing the stock market, or joining a real estate brokerage). In other instances, the technical aspects of science – but not exclusively of physics – are applied in technology development, consulting, and other envisioned roles. Sometimes individuals believe they will enter these roles while simultaneously keeping their university ties, and at other times the pattern parallels the one cited above: they contemplate leaving academic science altogether.

Entrepreneurial themes are confined to communitarians' accounts. A scientist more at home in the elite or pluralist world might scarcely know what to make of these extraprofessional references. Because these findings are not isolated to one or even a few individuals, they cannot be dismissed as exceptional. They represent a pattern, which says more about the social world in which these individuals work than about the individuals themselves. What it says, I argue, is that this world provides comparatively fewer opportunities for ambition. The consequences of limited opportunity are seen in how scientists adapt their careers to their environments: they decelerate and often lose interest in their work altogether.

I've started considering small businesses and ways of making money by devising products, and I think that might be an interesting alternative . . . something like writing software or applying some of the stuff in the lab – applying diamond film research to making new products and selling them. Also just doing something totally different that's more in the mainstream of the economy, like selling insurance or the stock market, something like that. I haven't really been getting more involved either in the stock market or anything else, but I have thought about it as an alternative, mainly because the monetary rewards are so much greater. It would have to be a full-time job because you have to know what's going on, you have to read the newspapers, you have to see how the stocks are doing. It's a full-time job. That's what everyone tells me. I may very well do that because you can make so much money. Probably a six-figure salary would not be out of the question if you devote eight, ten hours a day to it.⁹

Pluralists

Cooling-out proceeded differently among pluralists. In the communitarian world we often heard how scientists made radical transformations in their outlooks.

In many instances it was not so much a matter of having to settle for something less: many felt they had to settle for something altogether different from what they had once expected. Pluralists also cool-out, but in the end the process leaves most in a different frame of mind than that of their communitarian counterparts. Most pluralists retain confidence in their ability to proceed with major scientific work. The prospect of achieving greatness, however, has been considerably dimmed. Once their goals were centered on extraordinary accomplishments. Now their plans are scaled to the prospect of doing "solid" work. The people and careers they found on entering this world shaped their outlooks.

I think by the time you're a graduate student you at least have a decent perspective on what kind of structures are out there – what kind of universities work in which fields and what kind of atmospheres they have. There's a gradual narrowing of the pipeline as you get to higher and higher places. You would normally do your postdoc at the very best places. I was at Harvard [for my postdoc but also] had an offer from Princeton. Each place might have two postdocs a year, but they aren't going to have a faculty job in your [specialty] field more than once every three or four years. And so you end up moving a little bit down the stepladder. I think if I were at a place like M.I.T. or Princeton there might be more of a push. I might feel more driven because you're around people who are the best in the world and they let you know it, and it inspires you to work harder. I think this is a more relaxing atmosphere. I'm not quite as driven as I was. As a graduate student, I was very singularly directed towards succeeding in physics, and I devoted a huge fraction of every day to work. I would get up around eleven o'clock, go to work around noon, work until five, come home, have dinner, and then work again until midnight, and then go to bed. I do other things now. I'm married and I have a life outside of my work.¹⁰

Notice the references to life outside of physics. Familial and extracurricular references are evident in pluralists' and communitarians' accounts, but rarely in elites' (discussed later). This is especially noteworthy because interview questions were designed to elicit responses exclusively about the career; no questions asked directly about family or leisure. In effect, all three groups were exposed to the same "stimuli" in interviews, but their responses to these stimuli fell into different patterns. Among elites, work is the sole focus of the narrative. All other aspects of life, even those that may impinge on the career, are excluded from commentary.

In Goffman's (1952) terms, nonwork sources of satisfaction act as substitutes for a level of identification and reward with work that is not possible in a pluralist world. In abandoning their hopes for scientific greatness, pluralists turn to other aspects of life to compensate for the loss.

My aspirations were to be at a higher-prestige university, initially – Berkeley, Harvard, M.I.T. – types of places like I went to as a student. I was able to get into the best programs as a student . . . Ideally, I would have, at that time, would have wanted to be a successful scientist at one of those leading institutions. My view of life and career and institutions in

general has changed a lot. I think I'm quite content not to be there. It's hard enough at what I would consider a second-tier institution like [this one] . . . I'm looking for more personal stability now. I want to be able to spend some time on things other than my profession. My family – I just had two kids. That is important to me as well.¹¹

Pluralists' conceptions of a future self likewise capture the central trend that characterizes their collective aspirations: a striving for strong, solid (but not exceptional or weak) achievement. Scientists often express the hope that they will "continue" – that they will find challenging problems and projects. This is as true of older scientists as of younger ones, suggesting the rapidity with which the cooling-out process begins and solidifies.

A scientist at an early point in his career (age 35) highlights these themes.

I'm in a state now – I think I would like to do interesting work now, for the rest of my life, but I don't have any ultimate goal out there at this point that I'm trying to reach. I'm actually thinking about starting to do a little bit of science writing on the side, nonfiction articles for magazines.¹²

Elites

Finally, cooling-out among elites constitutes a different pattern still. Entering the elite world, scientists let go of their most majestic visions of grandeur. Like pluralists and communitarians, they saw themselves becoming more "realistic." Hopes of following in the footsteps of Newton, Einstein, and Fermi were set aside. But unlike pluralists or communitarians, elites continued to hold out hope for making major scientific breakthroughs. The question was not whether they would achieve greatness but at what level. Even though they gave up on fantastic visions (which could, anyway, be excused as youthful idealism), their momentum was unshaken. They were in a world where nearly all examples of careers illustrated the kinds of greatness to be achieved, short of Einstein and Copernicus. They became members of departments considered among the most distinguished in the world. By this overly simple standard, they had risen to the pinnacle of their profession. It is easy to understand, therefore, why many claimed that their aspirations increased in spite of having let go of their most romantic expectations.

I'm afraid my ambitions have grown. I want to do something good now. You replace one anxiety with another. First of all I had [a] survival anxiety. Now I have the anxiety that I'm given this remarkable opportunity very few people in history have had, that is, to work for some major research university with a secure position. I have no excuse really. If I don't do something really good it's because I wasn't smart enough.¹³

This scientist illustrates a more general pattern. Elites claim that their careers will falter only as a result of limitations posed by their own ability. Their

environment is seen as facilitative. It is structurally conducive to carrying out major scientific work. It possesses capable and plentiful colleagues, graduate students, and postdoctoral researchers. Access to major funding and publication outlets is comparatively easy. Modern and technically advanced equipment is on hand, as are technical staff. It is a world in which nearly all of the human, physical, and fiscal resources are in place for major work. The burden is thus seen to fall directly on the individual.

[Being here] has been the biggest plus. A fantastic institution. Terrific colleagues. I've had from the beginning very good support from the department. The students here are terrific. When you don't know something, there is always somebody who can answer it for you. That's fantastic. It's been a great place. I don't want to leave. You know I've been here for a long time.¹⁴

The communitarian world contained elements of unhappy sentiment, and members voiced their gripes about their situation. Elites tell a different story. The institution is cast as a haven, an unfettered greenhouse for the mind.

It has not been hard to get resources [here]. The [school's] management is a very convenient one in which to work. I have encountered very little so-called university politics here. I hear tales of some people at other universities, and it's always left me a little bit wondering how I managed to escape it.¹⁵

The pace of occupational life among elites appears swift; discussion with them about the future resonated with special meaning. Much of their self-identities is staked in what lies ahead. Elites are most often "future-oriented." What is notable is that this concern with "what is next" figures as much in the accounts of the young as in those of the relatively old. Careers are constructed with language that calls attention to what is waiting: the next project, the next article, the next experiment, the next talk, the next proposal.

We see the image of a future self in the account of the scientist below, who at mid-career eloquently describes an identity he hopes to assume.

The dream is to discover some fantastic new effect that knocks the socks off my friends and colleagues, that knocks the socks off the community, so that when I walk down the corridor, the young students know me and say, "There goes [Silverman], he invented the [Silverman] effect." That's what I want; I want my effect. I want to be the first person to predict such and such an event and for it to be . . . I can even smell what it's like already. It has to be something which once you think about it, is very reasonable. Very surprising at first sight, but at second sight, yes, of course, that's how it had to be. I want one of those. I want my Josephson effect, my fractional quantum pull effect.¹⁶

Images of the self in the future can, of course, go beyond the days in which one will be living. Contemplation of how the career will look after one is gone speaks ever more of ambition's hold on people's relations with their profession. In the account below, the end of a career is equated to the end of life.

I would like to be remembered as a good teacher, which I think is quite unusual, but I really care about classroom lecturing and I love doing it. I'm good at it. I read the obituaries in *The New York Times*; it's the first thing I read every day. I want one, and I want it to say that he was a fantastic teacher; his students adored him, and he taught a generation of physicists. That's one thing, and the other thing I want is: he was a brilliant researcher. He invented Effect X. I don't want the 500 publications, like the people in the biochemical communities. I don't want those things. I'm happy to publish three or four, five or six papers a year. I don't want big grants. I don't want money. I want to do something which is a subchapter in the next history of solid-state physics. It doesn't have to be the whole chapter. It's not like discovering superconductivity. But I want my own section "5-point-something." And it has to be beautiful. I don't want to find something that's just hidden away and if you dig deep enough it's there. It has to be elegant, and it has to be describable using very elegant pictures of mathematics.¹⁷

In moving from the young to the old, the key difference is the object of ambition, not the existence of ambition. By late-career phases, normally when physicists are around their mid-fifties, we see changes in how future selves are set. An emphasis on the process of "becoming" remains, to the extent that this process involves continued professional development and activity. But the future self contains less of the idea that one will become something substantially different. Older physicists have come to the realization that they have gone just about as far as they will go. They believe any status change will, in all likelihood, be small: their careers have peaked. The images they offer stress continuity. Older elites do not aim for greatness. For several, greatness has already been achieved; now it must be preserved. Even those older physicists whose claims on greatness may be meager or nil still mention "being busy."

I will continue writing papers and listening to talks. The things that I would fear most is the ability not to travel. Now I travel too much. But there is so much enrichment in talking to other people. I'll give you an example: since the end of the year, May 15th [it is September 14th], I have been in Europe four times and one time all the way around the world. I went from [here] to Paris and then to Montpellier. And then I went to Tokyo. Next week I have to go to Florida to give a talk on astrophysics. Then I have to go to Seville, and then to Rome, and then I will be back – all within ten days. So at the end of my career, I would like to keep doing that. It would be hard not to be able to go [places] where there is science being done.¹⁸

Elites were frequently ambivalent about retirement, much in contrast to communitarians. They often insisted they would never retire. Even those who said they might retire envisioned schedules that differed little from those of the present. The senior woman physicist quoted below is typical.

Well, I'm sixty-three, almost sixty-four . . . I plan to keep working as long as [my] health is good. This is fun for me. I like it . . . [A]fter I officially retire I just plan to keep working . . . I don't think my lifestyle is going to change that much . . . I know it sounds ridiculous, but I enjoy it. Nobody tells me to work as many hours a day as I do. [I'm] usually here

at six o'clock or a little after six o'clock in the morning and then I leave at about 7 p.m. Then I usually do a few things in the evening after dinner. It was just like I was as a graduate student. I haven't changed that much. I work many, many hours during the week. I do it because I enjoy it.¹⁹

PROFESSIONS AS NARRATIVES

We have known that productivity is enhanced by the prestige of university departments (Allison & Long 1990; Allison & Stewart 1974; Cole & Cole 1967; Crane 1965; Long 1978). As Long and McGinnis stated: "Once employment is obtained in a specific context, individual levels of productivity soon conform to characteristics of that context" (Long & McGinnis, 1981, p. 422). And we have known that age mediates this relationship, a pattern that has been explained by accumulative advantage. Feedback through recognition and resources successively benefits the productive while lack of such feedback successively impoverishes the less productive. The distribution of productivity becomes increasingly unequal as cohorts of scientists age (Allison & Stewart, 1974; Cole, 1979; Merton, 1973; Zuckerman, 1977).

We have not known, however, how these changes are experienced and meaningfully interpreted by people themselves. Nor have we acquired a sense of the consequences that these changes entail for ambition, career, commitment to work, and, ultimately, how a profession may be characterized in light of these dynamic qualities that situate occupational life. This work has revealed how people learn survival and acceptance norms in their local occupational environments, learning how to be more ambitious than they once were, learning how to let their ambitions subside, and/or learning how to let their ambitions go.

Furthermore, while life course theory has suggested frameworks for thinking about how lives and careers develop (e.g. Levinson, 1978, 1996), an ontogenetic perspective has prevailed. Here we have seen how lives are variously, rather than monolithically, lived. Rather than viewing the career as a set of pre-formatted stages through which incumbents pass, this sociogenic approach has explicitly treated occupational context as a constitutive force in adult socialization and development.

What happens to ambition and consequently to professionals and the profession at which they work in these three organizational environments? This study suggests three broad characterizations: even though the targets of ambition are perceived to become more "realistic" by people across settings, among elites ambition grows and remains a central component of their self-identities throughout the life course. Pluralists modify their ambitions more significantly in early and mid-career stages, and by mid-career the ambition of

the typical pluralist, while still "alive," has tempered. Communitarians dramatically modify their ambitions early in their careers such that by early-middle phases one readily hears accounts of ambitions that have died, careers that have become "stuck," and lives that have been re-oriented away from work.

More specific generalizations may be drawn to illuminate the key distinctions across cohorts within settings. Eight dimensions of identity surface from the data to ground these comparisons; these dimensions together with the substantive findings among the three groups of scientists are presented in Table 3.²⁰ Career phases in the table are defined loosely to avoid the problems of cohort-centrism characteristic of ontogenetic stage theories. Early career is defined as the assistant professorship, normally lasting up to seven years. Middle career is defined as the associate professorship, normally lasting around 5 to 10 years, and on into the first five or so years of the full professorship. Late career is defined as the full professorship roughly beyond its first five years.

Elites, pluralists, and communitarians focus their early careers on research, the expected fruits of which translate into promotion and tenure. But it is in these first few years as assistant professors when major changes in self and outlook on the career take root and develop over an ensuing period of time. By middle career phases the focus of the career becomes more diversified among pluralists who increasingly emphasize teaching, and shifts more radically still among communitarians who are in this stage completing the process of significantly modifying their ambitions. Among elites in the middle career, research continues to unequivocally hold sway, even as occasional members declare their interest and seriousness with which they take the teaching role. These patterns hold and intensify into late career.

Professional dreams follow an accompanying pattern of evolution across the settings. They intensify among elites who see and come to learn how to narrate an early career in which ambitions grow. Pluralists begin to re-scale their ambitions in ways that are exemplified and realizable within their environment. As we heard from the accounts, dreams of communitarians are radically diminished shortly upon arrival. These patterns hold and intensify through middle and late phases. Senior elites maintain their status and involvement as senior pluralists curtail involvements and see their ambitions subside; typically professional dreams among senior communitarians are no longer found.

All scientists who have passed through the filters and survived the competitions to get into faculty ranks in the late twentieth and early twenty-first centuries seek great recognition – this is compatible with the institutional goals of science (Merton, 1973a). But as the foci of careers change and as the fuel for

Table 3. Characteristics of Ambition, Self, and Institution in Academe.

Dimensions of Identity	Elites	Pluralists	Communitarians
Career Focus			
In Early Career	Research	Research	Research
In Middle Career	Research	Research and Teaching	Teaching
In Late Career	Research	Research and Teaching/Teaching	Teaching
Professional Dreams			
In Early Career	Intensify	Re-scaled	Diminish
In Middle Career	Intensify	Diminish	Subside/ Extinguish
In Late Career	Remain Steady	Subside	Not present
Recognition Sought			
In Early Career	Great	Great	Great
In Middle Career	Great	Average	Minimal
In Late Career	Great	Average	None
Orientation to Work			
In Early Career	Moral	Moral	Moral
In Middle Career	Moral	Moral/ Utilitarian	Utilitarian
In Late Career	Moral	Moral/ Utilitarian	Utilitarian
Work/Family Focus			
In Early Career	Work	Work	Work
In Middle Career	Work	Work and Family	Work and Family
In Late Career	Work	Work and Family	Family/Leisure
Attribution of Place	"Burden"	"Happy Medium"	"Stymieing"
Overall Satisfaction	Medium	High	Low
Form of Narrative	Becoming	Becoming/Being	Being

professional dreams replenishes itself or runs dry, the recognition that scientists seek also evolves in systematically distinct ways. Elites seek great recognition through their careers, their self-identities firmly staked in achievement. Pluralists come to seek average recognition in mid-career and generally sustain that orientation into late career. Faced with comparative lack of opportunity and constraints of seeing research expectations realized, communitarians come to seek little or no recognition from the wider professional community.

As careers in all three settings begin with a primary research focus, the orientation that elites, pluralists, and communitarians bring to their work is

moral, compatible with institutional goals. Realization that these goals can only be moderately satisfied or not satisfied at all makes pluralists, but especially communitarians, develop a utilitarian outlook on their work. Science becomes more of a means to an end and (particularly among communitarians) a "job," rather than a vocation and calling.

Changes in work orientation are accompanied by the way in which scientists narrate the relative place of work and family in their lives. Work remains central for elites (even as families arrive, develop, and impose demands on time), but for pluralists and especially communitarians, families assume a more significant role in identity construction and self-presentation.

The above patterns lead to overall characterizations of work-place and the person. The elite world is viewed by elites as a "burden" because institutional mandates for achievement and the internalization of lofty performance norms demand sustained effort. Succeeding in the elite world by satisfying these expectations becomes an "obligation" felt at both institutional and individual levels. For these reasons, satisfaction among elites can best be characterized as "medium": institutional position provides an objective measure of success but at the same time continuously asks that one great accomplishment be replaced by another, thus leaving many elites in a perpetual state of never feeling fully satisfied.

The communitarian world is viewed by communitarians as "stymieing" because most have had to make substantial and unexpected adjustments in the kind of career to lead. Consequently, satisfaction among communitarians can best be described as "low." This is not to say that communitarians never come to achieve a sense of satisfaction and peace with their place in the profession; as we earlier heard, many of them do just this. But even after this process is completed by late career, the typical account underscores these issues as highly consequential in shaping the person who presently speaks as someone who has "come to be."

The pluralist world is viewed by pluralists as a "happy medium" because it allows them to pursue their work without giving up on all of their ambitions. At the same time, it does not pose the onus of expectation characteristic of elites. Pluralists can embrace research to a degree, even to a high degree, just as they can (especially in middle and late phases) identify more with teaching – all without serious sanction. Variety, as their collective identity attests, characterizes life in the pluralist world. These conditions lead to relatively high overall satisfaction with self and institution. In light of these systematic differences, how may we use the empirical material on hand to conceptualize the academic profession in particular and professions in general?

This study has shown that elites, pluralists, and communitarians use different rhetoric to publicly present their life courses. The process of learning how to embrace and intensify ambition, modify, or reject it, is not individual or random: it is a group project, following a predictable pattern, geared to the organizational opportunities and constraints of one's work environment. Knowing "how to be" an old and acceptable elite entails a significantly different repertoire of roles, practices, and rhetoric than knowing how to be an old and acceptable communitarian. To achieve a more abstract and generalizable understanding, we may interpret these differences by adopting the concept of the *master narrative*. Master narratives are here defined as the dominant communication patterns that characterize how people order and present their passages through time and place (cf. Buchmann, 1989; Bruner, 1990; Polkinghorne, 1988).

We can posit four structural and cultural dimensions along which differences in these academic worlds arise. These structural and cultural distinctions represent ways to differentiate not only this sample of worlds and the narratives found in them but the population of elite, pluralist, and communitarian worlds that make up the whole academic system.

Structurally, worlds differ in the number and range of *opportunities* available to people (Allison & Stewart, 1974; Glaser, 1964; Merton, 1973c; Pelz & Andrews, 1966; Zuckerman, 1977). Ambition varies across worlds because different worlds offer different opportunities for ambition. Worlds vary in their wealth of human, fiscal, and infrastructural resources. These differences produce inequities (both in number and in quality) in opportunities to get ahead.

Second, worlds differ structurally in the predominant systems of reward or *incentives* extended to individuals (Glaser, 1964; Pelz & Andrews, 1966; Zuckerman, 1977). Definitions of achievement vary across worlds, so that in one (especially the communitarian) world, achievement in teaching or in administration carries equal weight with achievement in research. Failings in any one of those roles, including research, is excusable, though failings in all three normally results in sanction. By contrast, in another world (especially the elite), achievement is normally defined by research. Elites most easily forgive failings in administration and/or teaching. Failure in research, however, is like a knife in the side.

Culturally, worlds differ first in the *expectations* governing role performance (cf. Merton, 1973b). People in these worlds hold systematically different beliefs about what constitutes "achievement" – they must, since conforming to the moral, institutional career defines most scientists as failures once beyond the earliest phases. Worlds therefore have their local definition. Elites mandate greatness. Pluralists and communitarians, by contrast, gravitate toward other and more pragmatic outcomes; greatness becomes an increasingly all-too-distant dream.

Second, worlds differ culturally in the *symbols* that characterize careers said to be standard (Zuckerman, 1977). Elites instill in one another ambition for greatness if only because greatness embodies the pantheon – the heroes whose photographs line the corridor walls, who come to the meeting rooms to give talks, who have trained great minds that in turn have trained the current elites. In other worlds, greatness is a more far-removed curiosity.

Boundaries between worlds arise along each of these four dimensions. We may therefore speak of different worlds of opportunities, of incentives, of expectations, and of symbols. And we may just as easily speak of opportunity boundaries (limitless or limited), incentive boundaries (many or few; narrowly or widely defined), expectation boundaries (high or low), and symbolic boundaries (grand or unornamented) (cf. Lamont, 1992).

We must also be aware that these attributes are highly intercorrelated. One attribute often gives rise to or feeds off of another. Where we find a world of plentiful opportunities, we are also likely to find a world of potent incentives, of high expectations, and of mighty symbols. Where we find a world of meager opportunities, we are also likely to find a world of faint incentives, of low expectations, and of mild symbols. At root, these structural and cultural distinctions account for and describe the internal differentiation of a profession.

Thus prevailing conditions in these worlds work to produce distinct master narratives. Elites see themselves and are seen by others as pushing to get ahead, their self-identities competitively staked in attainment and recognition. The life course consists in principle and often in practice of a steady upward climb. This is a world in which the self is in a perpetual mode of *becoming*; the master narrative of this world embodies this mode.

The leading trend among communitarians consists of *being*. They describe themselves in ways that highlight steadiness. They often "get stuck," largely because the four sociocultural conditions in their world do not favor upward mobility. After early career phases, little social control regulates or helps to inspire peak performance. Their master narrative underscores this leveling-off.

Pluralists portray themselves in both ways, particularly after early career phases when jobs are secure. The most typical pluralist strives in early and midcareer and levels off thereafter. The typical pluralist in late career decelerates gradually as elites continue their upward climb and as most communitarians have generally come to a halt.

Science and other professions, therefore, may be viewed as an array of narratives, each characterized by a script that individuals have followed or are attempting to follow. To a degree, narratives can be chosen, emphasizing the role of agency. The choices available to individuals may be set in terms of a continuum of proscriptiveness and permissiveness (cf. Parsons, 1951). The roles that

elites can perform in keeping with local standards are few. The elite world is, thus, highly proscriptive, setting clear and comparatively inflexible parameters on exactly which roles count as legitimate and valued. The esteemed scientist is engaged and remains engaged over the career, although the specific forms of engagement may vary across life. The young scientist performs the role of the budding researcher, whereas the more advanced scientist may play more of a role as manager in addition to researcher – as a national spokesperson for the field, an administrator, an executive officer, a diplomat, or some other role.

Moving from the elite to the pluralist and communitarian worlds, roles become less proscriptive and more permissive. Different kinds of careers become increasingly possible and acceptable, and we find different narratives that reflect this heterogeneity in outlook, orientation, and ambition. Thus communitarians talked about turning away from science, entertaining and often acting on entrepreneurial, recreational, familial, and leisurely interests, and doing so with few social costs. Elites are more inclined to judge others on the basis of their latest scholarly work. Whether one became an oil magnate or was an all-star tennis player is secondary or altogether irrelevant. The worlds of science and the narratives they spawn exist, therefore, at different positions on a moral playing field. Having a narrative provides a reliable basis on which to predict the world in which any otherwise anonymous scientist works. Based upon results here, identification of that world spells out a host of ways, discussed through the eight dimensions of identity above, for how self, career, and ambition will most probably transpire. The way in which people narrate their work – in science, law, medicine, or politics – thus provides a basis for seeing how self and profession get constructed.

Continuity and change at both individual and institutional levels are fundamental properties of this construction project, as some previous approaches to professions have emphasized, but from different vantage points (e.g. Abbott, 1988). On the one hand, learning a career narrative consists of change as individuals adapt and develop a match between themselves and their work environments. On the other hand, this change is sought for in the interests of and often brings about continuity and harmony between self and institution, most often reflected in people's descriptions of "coming to terms or peace" with their careers.

On the institutional level, the organizations in which professional work is done "get built" and endure through these narratives, becoming representations of the kind of career most typically found within them at a given point in time. At the same time, however, institutions change, and narrative is both a manifestation and impetus for this evolution. In the case of academe, "institutional upgrading" – state colleges becoming universities, universities seeking to

grow in stature, wealth, and influence – is a phenomenon that captures such change.

The sources of institutional change are both endogenous and exogenous and express themselves through the four posited sociocultural determinants of occupational life (opportunities, incentives, expectations, and symbols). Examples of endogenous sources of change include modifications in governance and administrative practices (e.g. policies on recruitment or promotion – such as getting outside letters for peer review, which directly alters incentives and expectations). Examples of exogenous sources of change include funding and the labor market. A severely contracted academic labor market in many fields can be seen to increasingly push freshly minted Ph.Ds from elite schools to pluralist and (even more so) to communitarian ones; their presence, growing mass, together with what work they produce can alter the identity, status, and "sound" of those institutions – manifest in changes found in the expectations, opportunities, incentives, and symbolism of those social worlds. By contrast, tightened funding poses constraints which limit both individuals and institutions to blossom into elites.

A key point is that while this study has presented "career composites" for three kinds of organizational environments, those environments can change in important ways that affect the very composites. Were a similar study conducted twenty-five years ago, or were one replicated twenty-five years from now, we would likely see systematic differences in self, institution and how narrative links the two. These should be clearly seen among the fruits of a sociogenic approach, sensitive to time and place, to how professionals and professions exist and evolve.

CONCLUSION

Merton explored the idea, originating in Newton's aphorism, that if people see farther it is by standing on the shoulders of giants (Merton, 1965). But most scientists, like most people, are not giants, nor do most scientists, like Newton, scale lofty heights (Gustin, 1973). As Cole and Cole found, "a relatively small number of scientists produce work which becomes the base for future discoveries . . ." (1973, p. 228). Their data strongly suggested that most research is rarely cited by the bulk of the science community, and even less so by the most distinguished scientists who produce the most significant work (Cole & Cole, 1973).

Most scientists, thus, work not on the shoulders but in the shadows of giants: ambition, career imagery and unfolding, and narrative capture the way in which luminaries and abstract conceptions of greatness define a moral career,

which become a guide for measurement and interpretation by people working the shared occupational terrain. Only through living a real-life career do people adapt to a series of locations outside the secular pantheon of their field. This could be as true for scientists as for other professionals, from lawyers to physicians to business executives.

This paper began by identifying two main clusters of ways – trait and power perspectives – that sociologists have used to view professions. Future work would benefit from search parties that find and bring people into their professions – they have long been missing in professions research, yet they represent an additional mode of inquiry into occupations. From sports to finance, much remains to be found about identity and institution building based upon actual people's experiences and interpretations of what they do and how they see themselves doing it. Ambition and its chronology offer a key inside these occupational worlds, their people, and the causes and courses of their careers.

NOTES

1. Aristotle, *Nicomachean Ethics*, lines 1125b-1151b.

2. Rankings of the departments sampled from the 1982 study are similar to those of subsequent 1995 study. Fieldwork for this project was conducted in 1994, just prior to the release of the latter rankings; thus the earlier ranking study was used.

3. Interview No. 31.

4. *Ibid.*

5. Interview No. 40.

6. Interview No. 27.

7. Interview No. 31.

8. Interview No. 35.

9. Interview No. 30.

10. Interview No. 59.

11. Interview No. 56.

12. Interview No. 59.

13. Interview No. 23.

14. Interview No. 14.

15. Interview No. 13.

16. Interview No. 23.

17. *Ibid.*

18. Interview No. 8.

19. Interview No. 14.

20. I emphasize that these dimensions, and the points made in the discussion of them, are generalizations. No social world is internally homogeneous, and I have in the preceding discussion noted several within-world patterns (e.g. those communitarians who identify more strongly with science as job versus those who see science as profession). Moreover, some internal heterogeneity is composed of people institutionally located in one world but possessing, both objectively and subjectively, several characteristics of

self and career found in other worlds (e.g. an elite who stops doing research, embraces teaching wholly, and whose record and rhetoric comes to resemble communitarians; or a communitarian who has managed to live a "miniature version" of an elite career, producing a record and rhetoric resembling some elites). These are exceptions, though, not the norm. Exceptions are of theoretic and practical interest, however. Limits of space preclude a full treatment here, but additional research would be well-received that examines the conditions under which fractions of people (or even single individuals) in one world come to "look" and "sound" like those more characteristically found in another. In academic parlance, this question addresses the conditions that produce and sustain anomalously sized fish in their respective ponds.

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