Honor in the Academic Profession: How Professors Want to be Remembered by Colleagues

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Achievement in the professions is situated relationally. Work comes to constitute contribution only by the judgments of colleagues. This is paradigmatically the case in science and scholarship, where colleagues not only sanction others but also create their legacy. Normatively, it would stand to reason that colleagues would be held in high regard; the work of academia, and the careers of academics, depend on them. The present work, however, examines how professors value colleagues in actuality. Taking the field of physics, the article examines one aspect of the social significance of colleagues by asking how physicists might desire being remembered by them. Data came from interviews with 60 physicists at distinct career stages and employed at distinct university types. The results reveal a highly delimited number of ways physicists wish to be remembered. In addition, their responses vary by departmental tier, age, and productivity. The discussion exposes two sets of purportedly unequal and contradictory social codes used by academics to project a legacy: professional attributes that are code for "charisma" and personal attributes that are code for "morality." Anticipation of the self in memoriam is argued to constitute a principal means by which people intersubjectively construct status.

Keywords: academia, careers, professors, status, charisma, morality, colleagues

The work of modern science and scholarship is situated socially among *colleagues,* the fellow members of a profession chosen to serve with one another. The institutionalization of colleagues has occurred especially in the professions of law, medicine, and academia, where *collegiality* refers to a type of social control in decision-making and administration

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(Bess, 1988; Waters, 1989). Under collegial control, "an administrative act is only legitimate when it has been produced by the cooperation of a plurality of people according to the principle of unanimity or of a majority" (Weber, 1978). In different words, it is the enactment of shared governance among principals whose specialized knowledge operates as a predicate for shared culture and collective self-determination. Collegiality is premised on and produces a "sharing" or "service with others" on behalf of something greater than individuals, who, facilitated by the bonds that specialized knowledge engenders, evince respect and esteem as well as camaraderie.

While science, taken for the larger rubric of academia, is demonstrably a profession, it is not merely one of them (Ben-David, 1972). It is, as Gustin has explained, the ideal-typical profession from which all others derive, both the basis of their activity and the model for their organization (Gustin, 1973, p. 1131). It therefore exists as a key site in which to study the significance of its collegial organization.

Academic colleagues control processes that regulate individuals, organizations, and social institutions. At an individual level, their judgments control sanctioning processes: publication, promotion, awards, and punishments. They affect the quality of others' work, both by these processes and by supplying advice about such work. Testimonials in the opening footnotes of articles and prefaces of books offer evidence about the decisive importance of colleagues without whose involvement the work would suffer. In this vein, colleagues condition the reception, influence, and stature of work produced by fellow members of a field. These processes enable the operation of organizations which by turn legitimate collegial control, whether in departments, colleges or universities, publishers that house journals and presses, academies or professional associations. The standardization of these practices across organizations preserves a system on which the social institution of education relies (Zuckerman & Merton, 1971). The evidence indicates that ideas, and whatever contributions they come to make, are born of relations. Academic work and careers are inextricably conditioned by colleagues.

To these ends, the study of colleagues lends insight into the *social construction of status in academia.* If the primary goal of scholars is to advance knowledge, and if the only way we know it has been advanced is by whether colleagues certify it as such, then colleagues are responsible for assessing the value of a scholar's work and career. One's status cannot be self-assumed. Rather, it is created and consolidated in an intersubjective process, and ultimately defined by outside parties.[1]

Taking the field of physics, the present work examines one aspect of the social significance of colleagues by asking *how physicists might de-*

sire being remembered by them. In physics, "giants of the field" represent a norm to which many aspire, but which few will attain. Therefore, there is a need to know additional sources of meaning to which scholars attune themselves, and to solicit perspectives about anticipated legacy not only of those likely to be regarded as giants, but also people at various points in their careers and from various institutional types. It would stand to reason that scholars would derive status from professional accomplishment, since this is compatible with the institutional goal of scholarship—to extend certified knowledge (Merton, 1973). But how is status crafted when one's accomplishments cannot satisfy the exalted expectations of a field and the fellow members who, transmitting a goal of great attainment across the generations, sustain those expectations?

Desire for remembrance involves what has been termed the "post-self"—the concern of a person with his or her self in history (Schmitt & Leonard, 1986, p. 1088). The article takes into consideration two social-psychological concerns: the importance, if any, that physicists assign to colleagues *and* the specific attribution to colleagues of how physicists would like to be regarded. The exercise constitutes a version of Cooley's ([1902] 1992) classic formulation of the "looking-glass self." In the present case, professors imagine how they would like to be judged *in memoriam,* to intersubjectively create and project academic status.

Background

The background to the study proceeds through three segments: 1) a discussion of the rise of colleagues in the academic profession, which explains how and why they emerged as central to the configuration of modern academic work; 2) their consequent pivotal, but underexplored, role in the social construction of status in academia; and, 3) an explanation of why physics is socially situated as a prime field in which to examine status construction.

Rise of Colleagues

The ascendance of colleagues in the social organization of academia traces most especially, but undeliberately, to curricular innovation, and its coincidence with specific historical developments in American higher education in the late nineteenth century. The establishment of the elective system, introduced first at Harvard by its president, Charles Eliot, came to institutionalize colleagues as a social unit tied to knowledge production in what were then newly organizing departments that housed fields of increasingly systematic study. "The departmental organization of universities had not been designed to create local intellectual

communities but it made their formation easier by bringing together in circumscribed spaces persons of overlapping and sympathetic interests" (Shils, 1997, p. 18). The idea of colleagues emerged in magnitude out of the scholarly and research roles of what was, in the late 1800s, the onset of a larger body that would come to be known as the professoriate, marked by an intensifying specialization, a standardization of training and entry requirements, and a shared, communicable culture.

While this curricular change and its attendant organizational effects played prominently in the eventual crystallization of colleagues as a social form, other events reinforced the developing pattern: research and scholarly specialization that was accommodated by the departmental structure, along with the influence of the German research model of institutions and a steady flow of German-trained Ph.D.'s in American institutions (Geiger, 1986; Trow, 1977).

> From the very first the elective system fostered an organization according to precise subject of study. The pursuit of research made the crystallized department seem even more desirable . . . So relentless was this process that by 1902 at Columbia and 1904 at Chicago a lull began in the formation of new departments . . . The pronounced tapering off of totally new departmental fields which occurred shortly after 1900 indicated that a general permissiveness in this area lasted only for about two decades. In part this was because practically no one could conceive of further sectors of knowledge once the "backlog" of the nineteenth century had been accommodated within the academic structure. (Veysey, 1965, pp. 320–322)

Anchored by specialization, the rise of departments and a resulting growth in faculty numbers meant that the demand for competent hiring could no longer be placed in the hands of presidents; their hands were freed from this responsibility, except for ratifying authority, and it was given to departments whose members brought expertise to bear in the recruitment of bona fide new members. Together these forces produced collegial relations as they have come to be known. Centered in scholarship and research, these relations are also diffused to other roles, including instruction, which, paired with research, articulates the German influence on departmental organization—the Humboltian ideal. What is more, these developments bred behaviors in the specialized scholarly role such that they, too, became institutionalized, where earlier—dating to the medieval universities (Rashdall, [1895] 2010)—they were idiosyncratic: competition, ambition, rivalrousness, and the desire for recognition for one's contributions.

> The triumph of the university over the amateur was made possible . . . by the emergence of specialization as a requirement of scientific and scholarly achievement . . . The specialized academic had other specialized colleagues to speak to; his colleagues expected the detailed mastery of numerous minute details and of a large number of publications dealing with very small subjects . . . Specialization required speed of work which was not in the tradition of the amateur man of learning . . . If one wished to receive acknowledgement of a scientific discovery one could not allow one's results to lie in drawers. The need for a feeling of achievement, the desire for recognition, loyalty to one's department and university, personal ambition, the scientific ethos all pressed for publication as speedily as possible. (Shils, 1997, p. 28)

So ritualized have these behaviors become, they have produced excesses (Hagstrom, 1965), giving way to concerns of having in one's midst "good" colleagues, introducing paradox to the term *(see also* Bess, 1992). In the modern day and with a modern parlance, colleagues are nearly cliché:

> Who are your colleagues? How often do you consult with them and on what matters? The answers to these questions may well determine whether you succeed in your academic career. Evidence accumulated over the past 30 years shows that successful faculty in higher education—those who get promoted and tenured, who get recognized for contributions, who produce more and significant research—consult frequently with colleagues. The evidence is so compelling that if one were allowed only one line of inquiry to predict a faculty member's future success in the field, it might well be "Tell me about your colleagues." (Hitchcock, Bland, Hekelman, & Blumenthal, 1995)

Social Construction of Status

Colleagues are now commonplace to the social organization of academia. Like familiar fixtures, they are seemingly taken for granted, and have escaped direct empirical inquiry. Their everyday communication and decision-rendering constitute what Crane (1972) called "invisible colleges." Yet far from hidden, their judgments are tangible and determinative: they shape the statuses that fellow academics occupy.

To more fully understand the social construction of status, we can turn to an influential line of research that has established how academic status is conditioned by varieties of structural factors, including publication productivity, age, doctoral institution, and type of employing university. These factors often express their effects through processes of "cumulative advantage and disadvantage," which mean that "certain

individuals and groups repeatedly receive resources and rewards that enrich recipients at an accelerated rate and conversely impoverish (relatively) the non-recipients" (Zuckerman, 1977, pp. 59–60). In plainer words, the rich get richer at a rate where the poor get poorer.

Cole and Cole (1967) found that quality of publication was more important than quantity in eliciting recognition in the form of awards, positions in prestigious academic departments, and renown among colleagues. In ways consistent with the theory of cumulative advantage, they concluded that a reward system operates to encourage creative scientists to remain productive while discouraging less creative scientists from further research.

Allison and Stewart (1974) noted that publication productivity among scientists (as among academics within any given field) tends to be highly skewed. Drawing on a sample of chemists, physicists, and mathematicians, they argued that productive scientists maintained or increased their productivity, while scientists who produced little go on to produce even less later on. They note the major implication of applying the theory of cumulative (dis)advantage to their data: the distribution of productivity becomes increasingly unequal as a cohort of scientists ages, thus establishing a foundation for accruing status differences.

Long (1978) investigated the relationship between productivity (indicated by publication and citation) and academic position. Long found a strong effect of departmental location on productivity, but a weak effect of productivity on the allocation of positions. Publication productivity was found to exert an insignificant effect on both the prestige of a scientist's first academic position and on subsequent institution changes. However, this work revealed that while the correspondence between productivity and prestige of initial academic position was at first weak, the effect of departmental prestige on productivity increased over time. Moreover, for scientists who moved to other institutions, the prestige of the new department significantly affected their productivity in a positive direction. This work emphasized the point that factors other than publication and citation, such as scientists' graduate education, sponsorship, and postdoctoral study, played a more prominent role in initial academic appointment, which together exert a cumulative effect on status between the "haves" and "have nots."

The pattern is borne out by Allison and Long's (1990) conclusion that the effect of department affiliation on productivity is more important than the effect of productivity on departmental affiliation. Despite the weak effect of pre-employment productivity on placement relative to ascriptive factors such as mentor, doctoral, and post-doctoral origins, it is this productivity that remains the best predictor of later productiv-

ity—and the subsequent development of academic status (Long and McGinnis, 1979). What is more, Cole (1970) observed that top articles (indicated by citations) written by high-status scientists are no more likely to be widely used than top articles written by lower-status scientists. But lesser quality articles by reputed scientists do receive greater attention than articles of equal quality by less-renowned scientists.

Extant research has concentrated on how status differences in academia result from the advantages that some accrue as others accrue disadvantages. As studied, these patterns are circumscribed by structural factors—productivity, age, organizational origins, and destinations—independent of the claims that scientists interactively develop about their reputation and influence. Colleagues are absent from these structural dynamics, yet their judgments constitute the starting point of status processes. What attitudes toward colleagues do scientists possess, and how might they vary by these structural vantage points? Answers to this question allow us to examine status construction from a new angle: given that work is socially certified by colleagues, we can see how academic status is created and consolidated intersubjectively.

Physics and Physicists

Within the academic profession, the field of physics is situationally significant (Becher, 1990). It is the oldest and most mathematical of the sciences, and is therefore commonly considered the scientific discipline *par excellence.* The field's objectives help to endow it with mythic quality. Physics may be seen to stand between the sacred and the secular: physicists seek verifiable answers about a limitless universe, as if to bring ordinary mortals closer to the incomprehensible powers of the divine (*see also* Paul, 1980). For these reasons, physics—the field of formulas and abstruse numbers—is said even to possess romance and beauty (Chandrasekhar, 1987; Glashow, 1991). Most important, physics has a recognizable genealogy of near-immortals—Ptolemy, Copernicus, Kepler, Newton, Einstein—who promote a heroism both by serving as models of great attainment and by supplying strong symbolic power to a paradigmatic academic career that followers behold and imagine emulating. Physics thus provides an ideal setting in which to examine how members project an academic status through intersubjective desires to be remembered by others in the field.

Physicists, like many other scholars, do not set about with modest goals, but rather with thoughts of advancing the state of knowledge, because this behavior conforms to the institutional goals of academia (Hermanowicz, 1998; Merton, 1973). Even if this goal attenuates in the course of an individual career (Blackburn & Lawrence, 1986; Cole,

1979), or is weakly instilled by poor socialization, the goal remains recognizable, and for most, desirable (if perhaps forever fleeting), because it partakes of the core essence of science and scholarship (Clark, 2006; Shils, 1975a, 1975b). Working toward the goal endows scientists and scholars with charismatic authority (Gustin, 1973), and colleagues uphold the authority through their regard and recall. Regard and recall are omnipresent in academic careers, but are perhaps no more transparent than in obituaries. For physics, the mythic qualities are once again called on stage to excite and inspire, and a heroic narrative is told, composed authoritatively by colleagues from the work of the dead.

> His colleagues hailed Dr. Wilson as a legend who had changed how theoretical physicists went about their work, especially in particle physics, the study of the elementary and fundamental constituents of nature. He was also a pioneer in using computers and then supercomputers to study the properties of quarks, the building blocks of protons and neutrons. "He's a giant in theoretical physics," said Frank Wilczek, a Nobelist at the Massachusetts Institute of Technology, calling his work "quite profound." Steven Weinberg, a Nobel winner at the University of Texas at Austin, said, "Ken Wilson was one of a very small number of physicists who changed the way we all think, not just about specific phenomena, but about a vast range of different phenomena." (Obituary of Kenneth Wilson in *The New York Times,* June 21, 2013)

Only an apparently special group of people can refer to someone else as a giant, connected to the universe's fundamentals and building blocks, to someone as having changed the way we all think, such that he or she, a pioneer and now a legend, sits, as it were, with the saints of all the ages.

This is hardly lost on physicists. They anticipate their own achievements. The fact that great achievement is rare does little to extinguish the fire of its promise and potential (Westie, 1973). From a very early point, and extending into a professional career, they are able to understand that they have the chance to form part of an historical tapestry through their work. This was evident in interviews with professors in other studies. A physicist, age 34, made ready connections between scholarship and legacy:

> . . . 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 have. 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. (Hermanowicz, 1998, pp. 111–112)

If so much of science and scholarship is bound up by lofty aims whose realization can transfigure the matter of mortal men and women, how do physicists want to be remembered by those whose judgments help to get them there?

Study Design

The research on which this work is based was completed as part of a larger set of studies of scientific careers (Hermanowicz, 1998, 2009). In the originating work, 60 physicists of all ages working at a range of U.S. universities were interviewed in person by the author about multiple aspects of their careers, including the scientists' aspirations, assessments of their achievements and failures, and conceptions of future and "immortalized" selves. Interviews from which the present work was drawn averaged 90 minutes in length. All of the interviews were conducted under the assurance of both individual and institutional anonymity. All of them were tape-recorded, transcribed, and coded for analysis. Most of the scientists contacted expressed an eagerness to participate: the response rate for this work was 70%.

The scientists were selected randomly within their departments. Departments were selected on the basis of their ranking in the assessment of graduate programs conducted by the National Research Council (NRC) (Goldberger, Maher, & Flattau, 1995; Jones, Lindzey, & Coggeshall, 1982). Top-, middle-, and low-ranked departments were selected as part of the research design. This was done on the premise that differences in these departments establish different conditions—both structural and cultural—for careers. Thus, the selection of departments across a spectrum aimed to maximize variation in careers in order to see how individual scientists view and experience them from various locations in academia. Six departments were included in the study. This number was reached in order to acquire a relatively equal number of scientists spread among the three "tiers." Roughly equal numbers of scientists were interviewed from each of the institutional "tiers": 23 from

top-ranking departments; 18 from the middle-ranking department; and 19 from bottom-ranking departments.

For the present work, attention is focused on a specific question asked of the respondents: *"How would you like to be remembered by your colleagues?"* The purpose of the question was to solicit from physicists their views on how their colleagues figure, if at all, in their work. In analyzing the responses, a total of just eight qualities were mentioned by the scientists, and all eight were mentioned by more than one scientist. They thus are used as the codes for analysis. Synonyms discussed by single scientists were coded as they agreed with those qualities comprising the dominant list. Of the 60 scientists, 12 offered singular responses to the question; they spoke of just one way they desired to be remembered. By contrast, the majority of scientists provided multiple responses; that is, they wished to be remembered in more than one way. Their responses were coded accordingly via the eight qualities.

The scientists were free to field the question in ways they wished, including the invocation of reference groups to help furnish a response. That is, they could invoke local-departmental colleagues, colleagues in their specialty or in the general disciplinary field, or a combination of both, to talk about themselves in the past tense. Given the nature of other questions asked in the interview, in which scientists discussed their careers in light of the departmental conditions in which they worked, the author gained the sense that a majority of the scientists utilized local-departmental reference groups in responding to the question. It can be argued that the usage of local-departmental reference groups is the easiest means by which to develop a response. Local colleagues are those with whom one has, if not daily, then regular contact; they thus connote a familiarity. What is more, selection of other, external groups presumes a level of activity and renown by which a scientist could be known in the wider community of science and thus creates a higher and more difficult threshold to cross. As the data will show, all scientists had something to say in response to the question, albeit with a subset of them attaching little regard for the question whatever the reference group they may have had in mind to discuss themselves *in memoriam*.

Ways to Remember

While the ways in which academics wish to be remembered may be thought to equal in number the persons speaking, each believing that he or she is unique, I identified a delimited, finite set of ways "to remember." These are eight in number, and are listed in Table 1 along with their frequency of mention. Prominent among the ways that these academ-

TABLE 1
How Scientists Want to Be Remembered ($N = 60$ scientists)

Memory	Mentions	% of Scientists	% of Mentions
1. "Good physicist"	29	43.3	27.0
2. Honest	16	25.0	15.0
3. Congenial	17	22.0	16.0
4. Creative	10	17.0	9.2
5. Teacher/Mentor	10	17.0	9.2
6. Leader	7	12.0	6.4
7. Hard-worker	7	12.0	6.4
8. Broad	2	3.3	2.0
9. Don't care	11	18.3	10.1
Total mentions:	109		100.0[a]

[a]Percentages do not add to 100 due to rounding.

ics wished to be remembered consists of as a "good physicist." The subjects often spoke using these terms. By these terms, they conveyed the desire to have made a contribution. The phrasing, though, is notable: it is directed to *science,* and in specifying the scientific domain—partaking of physics—it speaks of *technical proficiency:* to have made a substantive contribution to the field. The essence of this way by which to be remembered is conveyed by the following subject:

> I would like to be remembered as a good physicist. "Good" means, did something solid in the development of physics . . . I would like to be respected for what I did . . . I did such and such; I wrote such and such nice paper about such a program, and the more important it is, the more they will respect me as a physicist . . . If I can achieve that, I can die any time. (Interview No. 41)

It is conveyed also in the following account:

> I would like to be respected as a good physicist . . . Mesoscopic physics is a new field that has developed in the last ten years. It deals with very small objects. What was discovered is that these things, if you make them small enough and go to a low enough temperature, very interesting phenomena arise. It has become very fashionable in the last ten years and a lot of the experiments had quite novel results. So far, these things are just toys, games that physicists play. It has not really made its way into applied [areas], or things you buy at Radio Shack. Until that happens, this is something that lives in the minds of a very few people. (Interview No. 7)

The next greatest cluster of scientists sought to be remembered as "honest" (25.0%), followed by "congenial" (22.0%). Another clustering of respondents wished to be remembered as "creative" (17.0%), as a teacher or mentor (17.0%). A still further cluster wanted to be regarded as a "leader" (12.0%) and as a "hard-worker" (12.0%). A final, distinct attribute, "broad" in one's interests and scope of work, composed a small portion of the respondents (3.3%).

At their face value the qualities by which scientists desire to be remembered may seem innocuous. But upon further examination the qualities convey clear social-psychological patterns, for they indicate the ways by which scientists meaningfully organize the work of science and, by turn, how science organizes the minds of its practitioners, such that a system of meaning about a generalized activity is sustained and transmitted over time. The first of these patterns consists in the very number of ways to be remembered. That there are just eight suggests nonrandomness and speaks of a normative occupational community bound by shared beliefs.

A second pattern amplifies the idea of community and suggests that it is not monolithic. Instead, the pattern speaks of within-community variation, what has elsewhere been termed "communities within communities" (Goode, 1957), and, in reference to the academic profession specifically, "small and different worlds" (Clark, 1987). While the ways to be remembered number just eight, the eight ways are not of one kind. Rather, one set of ways emphasizes *professional* routes to immortality; another set, *personal* routes.

Good physicist, discussed above, underscores scientific-technical virtue; it is a decidedly professional quality. Four of the other qualities similarly honor *professional* virtue. One is *creative* as a scientist; it is the work undertaken as a professional scientist that is remembered by having come about by this intellectual power.

> I would like to be remembered by my students as helping them and showing them how to do physics and showing them not only how to do it technically, but also how to do it creatively. How to get the essence out of what they are doing. To get the most out of it. By creativity, I mean to really understand deeply what they are doing. To get the most out of it. And to think hard about it. (Interview No. 1)

One comes to be recognized not merely as a *leader* but as a leader *in science,* and accomplishes this by one's *work.*

> Interviewer: How would you like to be remembered by your colleagues?

> RESPONDENT: As a leader of something. Something like "he's the one who invented a theory," like you would say Einstein is the one who invented relativity. (Interview No. 5)

When one is *broad,* one is wide-ranging in scientific interests and work-related achievements.

> To be involved in a variety of fields. To be broad. Broad-minded. That's rather arrogant. I try to do theory. I design experiments. I get interested in [many] things. (Interview No. 8)

Finally, a *teacher or mentor* may be remembered in part for personal qualities (such as interpersonal warmth, a capacity to encourage, and to support) but such qualities achieve their keenest meaning only in the presence of having been taught or mentored to do *something,* and in the present instance, it is something *professional.* When scientists say they want to be remembered as a teacher or mentor, it is not customarily undergraduate teaching to which they are referring, but to the training of other scientists. The remark above about inculcating creativity in students calls attention as much to creativity as to teaching and mentorship. Or, from another respondent:

> If I think about how I want people to see me, I do want them to see me as a good physicist; I want them to see me as a good trainer of students. (Interview No. 18)

Thus, the professional substance of teaching and mentoring is functionally prior to its personal ramifications. Whatever personal importance may be construed by teaching and mentoring, the importance itself is contingent on some measure, anticipated or realized, of success in professional offspring. Otherwise one simply wants to be known as "nice," "pleasant," or congenial (with students or with others), and that is a different affair.

It is a personal affair; the remaining ways by which scientists wish to be remembered emphasize *personal* virtues.[2] These are: *congenial, honest,* and *hard-working.* These virtues, illustrated momentarily, do not underscore technical achievement in the realm of science like the professional virtues above. Rather, they underscore *moral achievement in the realm of citizenship,* which can include the realm of science, but more typically refers to and encompasses loosely the workplace in general, the department, the classroom, the hallway, the university, the local community, and even the world writ large. In this sense, profes-

sional virtues are more restrictive in audience; personal virtues are more widely communicable and thus arguably more widely understood.

Professional qualities constituted fifty-eight (or 53.2%) of the 109 mentions about how to be remembered; personal qualities, 40 (or 37.0%). The balance was comprised of respondents who said they "didn't care" about how colleagues remembered them, an issue to which I shall return. Thus, even taking the sample as a whole, professional and personal qualities compete with each other for honor. Mindful of the idea conveyed by "communities within communities," still further patterns are traceable, and their demarcation provides additional testimony about the internal differentiation of academia.

Tier, Age, and Productivity

Do the ways in which scientists wish to be remembered by their colleagues vary according to other sets of conditions? To find out, the scientists' responses were cross-tabulated with major variables available from the collected data, including departmental tier, scientists' ages, and their publication productivity.

The desired ways to be remembered by departmental tier—high, middle, and low—are presented in Table 2. The table reveals socially symbolic distinctions. About three-quarters of the scientists located in the top tier desired to be remembered on principally professional terms. This was the case for more than half, and approximately a third, of the scientists in the middle and bottom tiers respectively. Thus, as prestige increases, so does a desire to be remembered for professional qualities. By contrast, as prestige decreases, a desire to be remembered on principally personal terms intensifies. Roughly equal portions of scientists across the tiers (on the order of 10%) stated that they did not care how their colleagues remembered them.

The patterns suggest varying community codes at work in the "small and different worlds" of academia. At the top, one's overriding desire is

TABLE 2
How Remembered, by Departmental Tier

	Professionally *N* (%)	Personally *N* (%)	Don't Care *N* (%)	Total *N* (%)
Top Tier, *n* = 23	29 (72.5)	7 (17.5)	4 (10.0)	40 (100.0)
Middle Tier, *n* = 18	18 (51.4)	13 (37.1)	4 (11.4)	35 (100.0)[a]
Bottom Tier, *n* = 19	11 (32.4)	20 (59.0)	3 (9.0)	34 (100.0)[a]

[a]Percentages do not add to 100 due to rounding.

to be remembered for what can be called "professional proficiency." To have done good work, to have contributed scientifically, to have been a good physicist—these are matters of occupational mastery. They speak of professional expertise and scholarly accomplishment.

The codes change over organizational strata. In departments that have graduate programs, but not major ones, and which tend not to be composed of the most prolific or accomplished researchers, the overriding desire is to be remembered for "personal morality." This theme arises in several accounts, and it creates notable contrast with prior passages from the scientists:

> Well, that's a good question. Remembered . . . I think in terms of someone who no matter what they had to do, always did the very best that that person knew how to do that job. In other words, if they said "well, he always tried 110%, he may not have been capable of doing it, he may not have been able to do it, but we know that he gave it his best shot." Never slacked off. Never dog-ed it. (Interview No. 27)

> I suppose the best would be as someone who has been supportive and helpful and a willing collaborator, and a person who pulls his weight—is helpful to people if they need help. (Interview No. 31)

> I just want to be remembered as someone who does things, who is not a crook—someone who just lays around and does garbage-types of things—monkey business. (Interview No. 33)

> I guess [I would like to be remembered] as someone who is hard working, and interested in students and the department. (Interview No. 37)

> [I would like to be remembered] as a person who made the department an enjoyable place in which to work; who was helpful, pleasant, who was conscientious in his duties. I think I'd be satisfied if they thought that of me. (Interview No. 40)

To have been congenial, honest, and done one's best by working hard—these are matters of moral citizenry. Across a profession, we are thus able to see communities within the same field, which otherwise may have little routine contact with one another, organized by different symbolic codes that stipulate how people see themselves, and how they would like others to view them: as proficient masters on the one hand, and as moral citizens on the other.

A hybrid of these communities, the middle tier contains a plurality of the forms. Indeed, the type of department emblematic of the tier, typically located at large public universities, often is composed of people who together create a mixture of occupational orientations. The type consists of those who work toward the advancement of a field as consistently productive researchers, alongside those who satisfy other institutional goals, such as mass teaching, the teaching of required courses, meeting with, advising, and forming interpersonal connections with undergraduates, and servicing study abroad programs, among other behaviors. Thus we come upon scientists who on the one hand say:

> [I would like to be remembered for] honesty and integrity. You can't really control whether you're going to have a brilliant idea a year from now, but at least one thing you have a little bit of control over is honesty. Unfortunately, the system is not necessarily conducive to acting that way all the time. (Interview No. 52)

This, alongside others, who on the other hand say:

> Respected as a scientist and a teacher. Comfortable in the sense of well-funded, so that I can do the types of research that I would like to do. (Interview No. 56)

Or:

> If I was going to have an obituary in *Physics Today,* I would like them to say, he did this, and he contributed to that and he contributed to that. He made interesting contributions to the subject. (Interview No. 59)

The data in Table 2 reflect an intermingling of these concerns, and the corresponding mix of codes for remembrance, especially pronounced in occupational life of the middle tier.

To ascertain whether responses varied by scientists' ages, individuals were grouped according to when they earned their Ph.D.'s, thus establishing what we may call their "professional age." Scientists were placed into one of three cohorts. Cohort I consists of those scientists who received their Ph.D.'s prior to 1970; cohort II of scientists who received their Ph.D.'s between 1970 and 1980, and; cohort III of scientists who received their Ph.D.'s after 1980.The results are presented in Table 3. The data again display distinctive patterns.

As age increases, desire to be remembered on principally professional terms declines; and the desire to be remembered on principally personal terms intensifies. What is more, as age increases, the percentage of sci-

TABLE 3
How Remembered, by Cohort

	I Ph.D. pre-1970 *N* = 22	II Ph.D. 1970–80 *N* = 16	III Ph.D. post-1980 *N* = 22
	N (%)	*N* (%)	*N* (%)
Professionally	17 (41.5)	16 (53.3)	25 (66.0)
Personally	18 (44.0)	12 (40.0)	10 (26.3)
Don't care	6 (15.0)	2 (7.0)	3 (8.0)
Total	41 (100.0)[a]	30 (100.0)[a]	38 (100.0)[a]

[a]Percentages do not add to 100 due to rounding.

entists "not caring" about how colleagues remember them increases. The percentage of scientists not caring about how their colleagues remember them, combined with the percentage of those desiring remembrance in personal ways, is particularly striking in the eldest cohort, where the attenuation of professional emphases is most pronounced. But, echoing the results of Table 2, this finding turns out to largely consist of an organizational effect. That is, the terms of desire—in how one wishes to be seen—are conditioned by where one works. We are able to draw out these patterns when examining the effects of publication productivity on how scientists wish to be remembered. Scientists were sorted into thirds by their number of published articles, the results of which appear in Table 4.

The most productive scientists seek to be remembered in decidedly professional ways. The most productive scientists are clustered in top-

TABLE 4
How Remembered, by Productivity[a]

	Top Third *n* = 21 *N* (%)	Middle Third *n* = 19 *N* (%)	Bottom Third *n* = 20 *N* (%)
Professionally	25 (66.0)	12 (36.4)	21 (55.3)
Personally	8 (21.1)	17 (52.0)	15 (39.5)
Don't Care	5 (13.2)	4 (12.1)	2 (5.3)
Total	38 (100.0)[b]	33 (100.0)[b]	38 (100.0)[b]

[a]Top third corresponds to 63–324 published articles; middle third corresponds to 26–62 published articles; bottom third corresponds to 0–25 published articles. Data come from the vitae provided by the scientists. Journal articles are used because they are the standard publication medium for measuring research productivity in physics. The number excludes books; textbooks; book chapters; edited volumes; conference proceedings; invited and contributed papers; book reviews; encyclopedia, world book, and yearbook entries; and articles listed on the individual's vitae as "submitted," "in press," "accepted for publication," "in preparation," and so on. If the same journal article was published multiple times, it is counted once. [b]Percentages do not add to 100 due to rounding.

tier departments (Allison & Long, 1990; Allison, Long, & Krauze, 1982; Allison & Stewart, 1974; Long, 1978; Long & McGinnis, 1981; Hermanowicz, 1998, 2009). The least productive scientists also desire to be remembered more on professional (55.3%) than personal (39.5%) grounds. But here the explanation is most likely conditioned by career stage: the least productive scientists are concentrated in early phases of their careers and may work especially in accord with idealized norms about professional achievement. The data convey that organizational location will likely mediate their views over time. If they are employed in top-tier departments where their productivity is likely to accelerate, their views of self will stay set in principally professional/proficiency terms. If they are employed in bottom-tier departments where their productivity is likely to decelerate, their views of self will change, and an understanding of a legacy will be constructed in largely personal/moral terms. If they are employed in middle-tier departments where their productivity can more readily sway in varieties of directions given the plural-like missions of the institutions that house these departments, their self-views likewise will evolve in bimodal directions, likely in ways consistent with the patterns found in Table 2.

Ambivalence of Scientists

In discussing how they would like to be remembered by their colleagues, notable clusters of scientists responded, in so many words, that they "did not care." Organized by departmental tier, roughly 10% of the subjects in each of the three tiers answered thusly (Table 2). By cohort, the percentages ranged from 7.0 and 8.0 (for the middle and youngest cohorts respectively) to 15.0 (for the eldest cohort; Table 3). By productivity, the percentages ascended from 5.3 (for the bottom third of producers) to 12.1 (for the middle third) and 13.2 (for the top third; Table 4).

As one scientist commented, "I don't get into that game very well. They can think what they want." (Interview No. 19) Or from another scientist:

> INTERVIEWER: How would you like to be remembered by your colleagues?
>
> RESPONDENT: By colleagues?
>
> INTERVIEWER: Yes.
>
> RESPONDENT: I don't care. That's not important to me. (Interview No. 12)

Another of the subjects put it this way:

> I don't have an answer for that . . . They can remember what they want . . . I don't do science for other people. I do it for myself. It doesn't matter to me. (Interview No. 14)

And another this way:

> RESPONDENT: They can forget about me for all I care. I really don't care.
>
> INTERVIEWER: Is it totally irrelevant?
>
> RESPONDENT: Yes, I think it almost is. "Totally" is a big, all-encompassing word, so I'm not sure it's totally irrelevant. But certainly 98%. (Interview No. 60)

Structurally, the responses convey ambivalence. It is social ambivalence directed toward colleagues who are otherwise understood to sustain a collective scientific enterprise. The ambivalence of scientists is a subject discussed at length by Robert Merton. By ambivalence, Merton referred to *structurally induced contradictions,* in which conflicting normative expectations defined particular social roles.

> The core-type of sociological ambivalence puts contradictory demands upon the occupants of a status in a particular social relation. And since these norms cannot be simultaneously expressed in behavior, they come to be expressed in an oscillation of behaviors: of detachment and compassion, of discipline and permissiveness, of personal and impersonal treatment (Merton 1976a, 8)

Merton takes up largely the ambivalence of scientists toward scientific work and practice, whereas here scientists demonstrate an ambivalence *toward other scientists.* The closest Merton comes to this subject is in the formulation:

> New scientific knowledge should be greatly esteemed by knowledgeable peers. But: The scientist should work without regard for the esteem of others (Merton 1976b, 33).

Colleague-peers, those most knowledgeable about the nature and substance of contributions to science, are the likeliest "others" from whom a scientist garners esteem. Against this backdrop, the data allow us to interpret two contradictory patterns. On the one hand, we might be surprised that so many scientists claim not to care about their colleagues' views of them, since the creation, reception, and influence of scientific work is contingent on those views. On the other hand, we might

be surprised that so few of the scientists state the type of ambivalence that Merton thought to normatively characterize scientists' professional roles.

Most scientists *do* care about how their colleagues regard them. They register a keen awareness for how they would like to be remembered, albeit on differing sets of prevailing terms, professional on the one hand, personal on the other. Such an overriding awareness of self in relation to one's work, whether in identification with *or* disavowal of others, may be taken to indicate the substance of academic life obtaining in contemporary times. Set in either professional or personal frames, the awareness speaks of desire for status.

Conclusion

Five conclusions may be drawn from the present research. First, there may be thought to be as many ways to be remembered by colleagues as there are individuals furnishing a response. But the patterns expose a "myth of the individual" (McAdams, 1993). There are, instead, eight main ways that scientists desire to be remembered. While finite in number, the ways are not of one kind. Means of remembrance are differentiated in a professional/personal dichotomy. Five of the eight routes to remembrance cluster as professional qualities; the balance of the three routes cluster as personal qualities.

Second, desires to be remembered by colleagues on principally professional terms increase as institutional prestige increases. By contrast, desires to be remembered on principally personal terms increase as institutional prestige declines. In examining the process of peer review, Lamont (2009) observed the application of varied criteria to constitute "excellence" across fields. But even in one field, as the present study exposes, conceptions of excellence are socially nestled: by organization, age, and productivity. It is, moreover, especially striking that such variation is evident in a prototypically high-consensus field (Braxton & Hargens, 1996).

Third, the ways by which scientists desire to be remembered—professionally versus personally—speak of organizational codes for status. Professional remembrance is code for charisma as embodied by proficiency of a technical craft. Personal remembrance is code for morality as citizens in an occupational community. People lay claims to a status as "charismatic" by *having done work* as contributors to science versus claims to a "moral" status by *how one went about the work that one did* as honest, congenial, and hard-working.

In terms that bear underscoring, the charismatic typically invoke *universalistic* criteria, and the moral *particularistic* criteria, to form inter-

subjective judgments (Long & Fox, 1995). Universalistic criteria are *scientific* in substance; they pertain functionally to the *advancement of knowledge.* By contrast, particularistic criteria are *social* in substance; they pertain to the *attributes of the person* located in science who may or may not be trying to advance knowledge, but which are functionally irrelevant to assessing the validity of any advancement, such as gender, race, congeniality, work ethic, and so on.

Fourth, desires to be remembered on professional terms decline with age. Desires to be remembered on personal terms increase with age, as does a sentiment of "not caring" how one is remembered by colleagues. Thus, to the extent that people care about what their colleagues think of them, morality matters more than charisma over time.

Finally, most scientists want to be remembered, and provide ample responses about how they wish their colleagues will remember them. But a notable subset do not. They illustrate an ambivalence of scientists toward other scientists. While ambivalence is noteworthy, its operation in the present argument is rhetorical. In academia, colleagues are akin to language. To have language, one must have an interlocutor. There must be context and response in order for the speaker (in this case, the scientist) to be able to understand and appreciate "what he or she has done from him or herself." "I don't care" amounts to a rhetorical reply that belies the social relations in which work comes to count as contribution. The recognition that one's self-realization is contingent on others may engender resentment in some. But this very act presupposes the existence and significance of collegial control. One can do all the rejecting one wants, but that rejection is but a reminder that colleagues exist to judge. This subset of scientists are, then, "exceptions that demonstrate the rule." In a *social* reality of relationally composed statuses, "I don't care" cannot exist, since it obviates the basis of existence.

In an interview about scientific careers, work, and identity, why should people turn to principally particularistic, as opposed to universalistic, ground in which to stake their reputations? The answer is likely rooted in the extent to which one's status is defensible (Ridgeway, 2006). In earlier theorizing, Gouldner (1957–1958) developed the distinction between "locals" and "cosmopolitans" as applied to academics. Locals are marked by high loyalty to their employing organization, low commitment to specialized skills, and usage of internal reference groups to form self-assessments and images of themselves. Cosmopolitans are, by turn, marked by little loyalty to their employing organization, high commitment to specialized skills, and usage of external reference groups to form self-assessments and self-images. While it comes as little surprise that statuses vary across organizations,

how they differ as revealed in the present study is novel, and it belies earlier theorizing.

Morality operates as a means to curb expectation. In science and scholarship, expectation is never in short supply (Fox & Ferri, 1992; Hermanowicz, 2006). But when performance cannot deliver on expectation, individuals are compelled to turn to other sources for an identity that is both meaningful and defensible, in order to maintain a coherence of self (Goffman, 1952; Linde, 1993). It is striking that morality is selected as the chief means to salvage the self, for it constitutes a meeting of the secular with the sacred.

In Abrahamic tradition, morality trumps all other behavior. Great scientific achievement—even in an era of modern science—has been connoted with "unlocking the mind of God" (Paul, 1980). As Gustin (1973, p. 1124) observed: science is thought to be charismatic because a person "is thought to come into contact with what is essential in the universe," a point that is consistent with Merton's observation, in accounting for the integration of religion and science in seventeenth century England, that "the religious ethic, considered as a social force, so consecrated science as to make it a highly respected and laudable focus of attention" (Merton, [1938] 2001, p. 106; also quoted in Holton, 2005, p. 10). For the reasons explained at the outset, this is perhaps no more apparent than in physics.[3]

In an absence of great achievement, morality preserves a route to salvation, identifying how people can orient themselves to the "good" (Stets, 2010). In addition, it always marks sacrifice, as though to say: "Look at what I gave up, so that others could prosper." By invoking claims to a moral status, a scientist—relegated to a location peripheral to the major activity at the center of science—provides an excuse as well as an explanation for not having fully realized one's own ego. Remembered as "being good" by others in the profession thus becomes compensation for comparative failure.

Yet it is an ironic choice on which to base status. Those making claims to a principally moral status are mainly *locals.* The reach of their professional activities and accomplishments tend to be eclipsed by their employing organization. But as moral, they appeal to a reference group that could be no more *cosmopolitan.* Customarily made modestly, the appeal is to a status that turns out to transcend all other status claims, not the least of which are those of the charismatic—habitually productive and accomplished physicists who, against this relief, are interminably mundane.

Morality, because it is the embodiment of virtue, is a protected status. Unlike the stock and trade of science, it cannot be criticized, con-

demned, or cast off. It is thus the perfect way to prevent admonition from colleagues, near and far, who are more successful. By contrast, because it consists in the discovery of properties about the universe, the charisma of science confers honor through great scholarly achievement.

Not all can get there that way, however. Some do not come into sufficient contact with the routines of science to absorb its charismatic effects. Even a portion of elite scientists, affirmed organizationally and materially, can experience this weakness and break code, turning away from it, instead desiring to be remembered by colleagues on personal grounds. It is—or so believed to be—a more assured course. In conforming to the charisma of science and in deviating from it, scientists stake their status on different grounds, each at once unequal and transcendent in their powers to produce a legacy.

That individual careers are reducible to eight "ways of seeing," which are by turn identifiable by two claims to status, underscores the social significance of reputation: it is through stories about its figures, who are typical in their atypicality, that science, like society, defines itself (Fine, 2001). Reputation, a composite means to conceptualize a person, allows people, and what they do, to be knowable by others. Without agreement on the meaning of contributions (or how they were made), there can, for science and scientists, be no past, and thus no basis to have formed the present. While internally differentiated, science, like nations, unites through remembrance, "through sedimented narratives, and through tradition," as evinced by regularized behavior and through the delimited ways by which its practitioners project themselves (Fine, 2001, p. 7). In science, charisma and morality exist in a contest, constituting a politics about who is recalled and commemorated and for what reasons (Fine, 1996). Morality is a re-framing of achievement; the reframing appeals to a large, even populist, audience and serves, not coincidentally, as a way to claim dominance (Lamont, 1987). But both charisma and morality aim at social integration: through symbolic *work* on the one hand and through symbolic *ways of work* on the other. To this end, the competing bases for status in academia, at once subordinate and supreme, are victors by providing a model of and a model for behavior (Geertz, 1973; Halbwachs, 1992; Schwartz, 1996). They constitute the means, varied yet one, by which science is set off as sacred, and provide paths whose routes are believed to result in a memory of honor.

Notes

[1] I am indebted to reviewer 3 for suggestions about argumentation in this section of the article.

[2] It is, of course, possible to respond to the question of how one might like to be remembered by one's colleagues by invoking both professional and personal qualities, and some individual scientists did just that. The present analysis proceeds by the coding of a scientist's response in its entirety. To illustrate for simplicity, consider the following hypothetical response: "I want to be remembered as a good physicist, as creative, as a leader, and as honest." The response contains four qualities. "Good physicist," "creative," and "leader" are coded as professional qualities, "honesty" as a personal quality. By one measure, the hypothetical respondent wishes to be remembered for both professional and personal qualities. By this measure, however, the analysis *underestimates* professional qualities spoken by the respondent. By another measure, and the one adopted in the present analysis, *each* of the codes is represented in the tabular distributions, and is thus more inclusive of how respondents think and speak about themselves. Where appropriate in the discussion, language is used to characterize the respondents as wishing to be remembered on "principally" professional or personal terms.

[3] Do the results pertain to other fields besides physics? It has been argued that the pantheon of great physicists inspires members to pursue exemplary careers. The pantheon of physics is arguably best known in the popular mind. But while physics occupies a special location among fields as one that attempts to answer metaphysical questions empirically, this does not necessarily mean that the structure of careers in physics is systematically different from that of other fields. All academic fields, and perhaps all professional lines of work requiring scarce levels of talent, have a pantheon whose achievements set a superior standard by which others may strive to work. The physicists of this study are academics, and thus their careers are structured and acquire meaning by way of reward systems of universities. In like ways, reward systems structure the careers of scholars in other fields. One can safely infer that academic status is intersubjectively constructed regardless of field. The *specific* statuses to which members assign meaning (e.g., professional/personal; charismatic/moral) may vary by field, a subject that requires empirical exploration (for additional discussion, see Hermanowicz, 2009, pp. 252–260).

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