tenure is based on necessity. Tenure is a requirement for academic freedom because, without it, even a full professor at the end of his or her career might be reluctant to speak freely. But if tenured academics are not speaking out then, as Ceci et al. suggest, we need to ask whether there are other justifications for the practice.

Some critics of academic tenure argue that it is unjustified, pointing to the protection it gives unproductive older scholars. These critics seem to think that a university should be run more like a professional sports franchise. Like a sports team, a university department has a fixed number of positions ("slots") that must be filled. In athletics, this means that every season each incumbent athlete is held to the standard of his potential replacements: past glory counts for little once current performance begins to decline.

A good university will also try to hire and retain the very best young talent, but old professors linger on – in some cases long past the time when a fresh new face would have improved overall quality. It is not academic freedom that is wanting, but academic performance. Why should this happen? If the goal of academic tenure is to generate unfettered research and teaching, and if we are not getting much of this (as the target article suggests), then why are universities not organized more like sports teams?

The answer is unlikely to be that the training period of a professor is particularly long, or that it requires exceptional dedication, or that it is undertaken with a low probability of success. Athletes too must assign their youth to focused study for little or no remuneration and with no guarantee that their efforts will ever help them earn a living. Neither is it clear that an academic has more to lose if he or she is forced to give up his or her job late in life. Athletes love their work and often have very few skills to bring to the outside labor market.

Ceci et al. also suggest that academic tenure might be compensation for low pay. Athletic salaries are high, but this was not true before television, and it is still untrue in the less popular sports. Poorly paid athletes do not get tenure – they find other work once their athletic careers are over. And, although it may be true that the productive period of an academic's career is longer than that of an athlete's, this would explain only why the average academic career is relatively long, not why older professors are never fired.

So why is it that academics are anointed with tenure but athletes are doomed to fight (and eventually lose) a battle for positions on the team? The economic explanation does not rely on academic freedom. It depends on the critical importance to the organization of hiring the best talent and the relative difficulty of observing potential performance (Carmichael 1988). Athletic skill is comparatively easy to judge, and management is better than most at identifying the best young players. In a successful university, it is the incumbent professors in a department who choose whom to hire. Given the vast and expanding state of academic knowledge, these are the only university employees in a position to judge the potential of candidates.

With time, of course, the research and teaching productivity of all faculty becomes easier to observe. So, in principle, the dean could fire the weakest faculty member in a department and then accept the advice of those remaining on whom to hire. But suppose you were working at a university that had this policy: you would understand that everyone in academe eventually sees their performance fall as they age, and that, as the knowledge frontier expands, each generation of scholars has a head start on the previous one. So you would know that if you identified the best candidates to hire, there would come a time when your performance would fall below that of the younger people in your department. In this context, would you ever recommend the hiring of someone you expected to be better than yourself? Equally important, perhaps, would you ever pass on to a brilliant young colleague the specialized knowledge you have gained from years of professional experience?

Tenure is not just about academic freedom, which is the hypothesis challenged by the target article. Tenure is also required if incumbent professors are going to identify candidates who might turn out to be better than them, and if they are going to help these young scholars by passing on their accumulated knowledge. Like the academic freedom argument, this claim is based on necessity – tenure on its own may not be sufficient for good hiring. But without it, the university would lose something valuable: the input of its incumbent scholars to the hiring and training process.

This view of tenure is consistent with some other aspects of academic life. Young professors are often hired on "tenure track" appointments, meaning that their tenure decision will depend on their individual performance only, not on their performance relative to that of their colleagues. This fosters collaboration among young scholars and allows them to participate in tenure and hiring decisions. As well, since faculty have no input to personnel procedures in other departments, administrators can provide incentives by letting entire departments compete for resources. Among economists this idea is sometimes expressed as: "Good universities don't support their bad departments."

The economic justification for academic tenure depends critically on the value of the information provided by incumbent professors. If management can evaluate potential new hires, as it can in high schools, community colleges, and perhaps some teaching universities, then there are no good economic arguments for tenure. In these cases, especially if there is no compelling argument based on protecting freedom of expression, we should let management hire and fire under the same legal constraints as in any other industry.

Scientific psychology and tenure

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Abstract: Ceci et al. draw conclusions that are inaccurate, analyze and report results inappropriately, fail to translate their scale into policy-relevant terms, and draw overly strong conclusions from their single study. They also attribute all the ills of academic appointments to tenure, and ignore problems with other aspects of the system. Their conclusion that tenure is not supported is at best premature.

Ceci et al. contend that the practice of tenure is not supported by its limited impact on judgments by faculty members that their colleagues would intervene in certain academic controversies or ethical violations. But the application of scientific psychology to such policy issues as tenure is valid only if the research adheres to methodological criteria that ensure the legitimacy of the empirical conclusions, and policy implications respect the complexity of the societal system to which scientific findings are applied. Ceci et al. are to be challenged on both grounds.

Ceci et al.'s major conclusions are sometimes inaccurate. In section 9.1 of the target article, they assert that "Untenured assistant professors and tenured associate professors believed their cohort was less likely to insist on academic freedom than the full professors' cohort." This is incorrect for the scenarios that directly concern academic freedom. Figures 1 and 2 demonstrate that the perceived likelihood of professors at their own rank teaching a controversial course as planned is lower for assistant professor judgments (M=3.0) than for associate and full professor judgments (M=5.0 and 5.0, respectively). Figure 5 demonstrates that the perceived likelihood of professors at their own rank submitting unpopular research is much lower for assistant professors (M=3.3) than for associate and full professors (M=6.0 and 6.3, respectively).

These inaccurate conclusions are anticipated by Ceci et al.'s unclear analysis and presentation of results. The authors never report actual comparisons corresponding to the preceding conclusion and confuse target and respondent rank in several places. For instance, in section 5.3 they write, "all expressed the belief that full professors would be more likely to confront a wrong-doer . . . however, the magnitude of this difference was rather small - only .3 to .4 of a scale point separating full professors from associate and assistant professors." But the qualification concerns respondent rank and the initial claim target rank, which actually differs by over 1.0 unit between assistants and fulls and over .5 units between associates and fulls (see Fig. 3 of the target article). And, in section 4.2, Ceci et al. report that, "the likelihood of teaching the course as planned ... was believed to be *much* higher if the faculty member in the dilemma was described as a full professor than as an associate or assistant professor [both $Fs(2, 904) \ge 108$, p < .0001, $\omega^2 = .193$]." What the two Fs represent is ambiguous (numerator degrees of freedom are 1 for pairwise comparisons), and this pattern only occurs when averaging across respondent rank rather than focusing on faculty judgments of their own rank. Furthermore, it tells little about the more relevant contrast between assistants and the two tenured ranks.

Ceci et al. report statistics on the significance and strength of their findings, but fail to translate their scale into meaningful terms for policy. The critical question is: What proportion of tenured and untenured faculty would act in accord with academic freedom? The answer to this question requires some threshold be applied to Ceci et al.'s scale to produce the desired proportions. To illustrate, assume normal distributions with Ms of 3.0 and 5.0 (the values obtained for assistant and tenured ranks for teaching controversial courses as planned) and standard deviations (SDs) of 1.5. With a low threshold of 2.5, 63% of the non-tenured group and 95% of the tenured group would teach the course as planned – an increase of 32% or 51% more faculty. A moderate threshold of 4.0 produces percentages of 25% and 75%, a difference of 50%, representing 200% more faculty. A higher threshold of 5.5 gives values of 5% and 37%, a difference of 32%, representing 673% more faculty. Most proportions, except those for low thresholds at which virtually all faculty members teach the course as planned, represent real improvements in the reported manifestation of academic freedom upon receiving tenure. The basic lesson is that nothing substantial can be derived from the original scale without assumptions associated with thresholds for the critical actions of faculty - something Ceci et al. failed to do.

Other methodological shortcomings include the use of elite faculty who may be less concerned about job security than less privileged faculty, the reporting of effect sizes without acknowledging that small effect sizes are sometimes associated with "robust" effects, failure to conduct contrasts that allow attribution of variability to separate tenure and final rank effects, expecting tenure to be a panacea for all possible influences on academic expression (e.g., concerns about appointment to full professorship, which is a separate issue), and describing their research as "an experimental study of faculty beliefs" when the only true experimental manipulation is faculty rank in the scenarios.

One important methodological and policy limitation is the lack of replication. Ceci et al. are to be commended for taking a first step towards the empirical study of tenure, but it is just a first step. Scientific models tend not to become well-founded on the basis of one study, in part because of every study's inevitable flaws. Later studies tend to be stronger and more comprehensive, hence providing a sounder foundation for a scientific model and ensuing policy implications.

In extending their conclusions to policy, Ceci et al. wrongly attribute all ills of academic appointments to tenure, when in fact tenure is just one element in a complex system. Tenured faculty do not have "appointments for life" and can be terminated for inadequate performance (not just egregious misconduct). Termination may only be rare because of the extremely lengthy

educational and appointment procedures that precede tenure, or because of inadequacies in the administration of university faculty rather than as a result of tenure per se. Tenure can hardly be blamed if administrators choose to not monitor faculty performance, not provide corrective feedback, and not undertake demanding legal requirements for termination similar to those used in comparable professions (e.g., medicine, law).

Ceci et al. also largely ignore the financial and related implications of removal of tenure. The financial implications of lowering university job security could be substantial if universities want to attract strong faculty. This could even extend to serious financial implications for termination if strong faculty members began to demand the kinds of contracts that see senior administrators in business receive extraordinary financial settlements when relieved of their positions. Or, university administrators overly concerned with finances may choose to refuse such requests, resulting in compromises to quality that could be difficult to document.

In conclusion, Ceci et al.'s study does not support the conclusions they draw, nor would those conclusions alone, even if valid, be sufficiently strong to support their policy implications for tenure. Further research and well-founded theorizing are required.

The constraints of academic politics are not violations of academic freedom

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Abstract: Tenure is designed to protect the academic freedom of faculty members by insulating them from arbitrary dismissal by administrative authorities external to their community of scholars. Therefore, the target article's focus on constraints that derive from peer pressures and academic politics is misplaced, rendering the results of the survey irrelevant to the issue of the value of tenure.

Ceci et al.'s conclusions stand or fall on the validity of their measuring instrument. They claim to have assessed the faculty's willingness to insist on the exercise of their academic freedom by determining the extent to which faculty members at different career stages are willing to insist on teaching a course unpopular with their senior colleagues, or to publish a similarly troublesome article. These may very well be interesting data, but they have nothing to do with the value of tenure in ensuring that freedom.

The target article fails to distinguish between interference with academic freedom by forces external to the academy and inhibitions of faculty freedom that derive from interactions within a community of scholars. Tenure is designed to address the former sources of pressure: It shelters faculty from the predilections of legislators, governors, university presidents, and boards of trustees. Tenure cannot affect the group dynamics that operate within a community of scholars. Tenure, as Finkin (1996, p. 3) notes, is the assurance, following a probationary period, that "the professor can be discharged only after a hearing before his, or her, academic peers." That is, tenured faculty can only be dismissed for "just cause" and following "due process." Dismissal is an administrative act, and thus tenure protects against actions by entities or persons in the chain of command, from the president of the United States, down. Tenure, however, does not and cannot insulate faculty members from the constraints of academic politics. The target article demonstrates, at best, the existence of such social pressures, but it provides no useful data reflecting on the value, or effectiveness, of tenure.

The survey administered by Ceci et al. does indicate that at different stages of one's academic career, one is more or less