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Shi-Ling Hsu, Cooperation and Turnover in Law
Faculties: A Game-Theoretic Model and an Empirical
Study, 102 Marq. L. Rev. 1 (2018)

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COOPERATION AND TURNOVER IN LAW FACULTIES: A GAME-THEORETIC MODEL AND AN EMPIRICAL STUDY

SHI-LING HSU*

A standard account of group cooperation would predict that group stability would bring about greater cooperation because repeat-play games would allow for sanctions and rewards. In an academic unit such as a department or a law faculty, one might thus expect that faculty stability would bring about greater cooperation. However, academic units are not like most other groups. Tenured professors face only limited sanctions for failing to cooperate, for engaging in unproductive conflict, or for shirking. This article argues counter-intuitively that within limits, some level of faculty turnover may enhance cooperation. Certainly, excessive and persistent loss of faculty is demoralizing, and reduces the number of individuals among which administrative work can be spread. But for less dire losses, faculty turnover may play the disciplining role that academic units are deprived of by the tenure system.

This article sets forth a game-theoretic model showing how the possibility of faculty turnover may induce greater cooperation in a faculty. The intuition is that while some antisocial behavior in a faculty—fighting or shirking—may garner some short-term gains at the expense of others, the possibility of exit may reduce this behavior, because loss of a colleague could be worse than the gains from fighting or shirking. Losing a colleague means probably losing a productive colleague, taking the time to replace her, and possibly replacing her with a less productive substitute. These downsides may play a role in curbing unproductive behavior in a faculty. This article presents some empirical evidence in support of the hypothesis that faculty turnover short of some

excessive amount does, in fact, produce higher levels of collegiality and collaboration.

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I. INTRODUCTION

A fundamental tenet of game theory is that the longer groups stay intact, the higher the likelihood of cooperation.¹ The late Elinor Ostrom, a political

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1. Robert Axelrod & William D. Hamilton, *The Evolution of Cooperation*, 211 SCI. 1390, 1392 (1981) (stating that individuals are more likely to cooperate the higher the probability that they will

scientist who won the Nobel Prize for Economics in 2009,² is best-known for her groundbreaking study of group cooperation in resource management, in which she analyzed a dozen case studies of long-lived communities sustainably managing a common-pool resource.³ Be it fish,⁴ forests,⁵ or groundwater,⁶ and be they Turkish,⁷ Swiss,⁸ or Californian,⁹ a key ingredient to successful communal resource management, Ostrom found, was long-term stability of the community.¹⁰ In game-theoretic parlance, long-term group stability means that individuals who “cheat”—who engage in uncooperative, selfish, or destructive behavior¹¹—can be punished by the group.¹² The threat of punishment does not work if individuals can avoid it by simply leaving the group.¹³

Cooperation is essential to academic departments and colleges. Cooperation means different things in different disciplines,¹⁴ but all other things

interact again in the future). The Prisoner’s Dilemma game posits that two crime suspects are captured and separated for interrogation by a prosecutor. With a certain incentive structure, it can be shown that rational self-interest can overcome collective interests, and that each prisoner would rationally choose to confess, or “cheat” on her co-conspirator. *See, e.g.*, ROBERT GIBBONS, *GAME THEORY FOR APPLIED ECONOMISTS* 2–4 (1992). Group stability is modeled by repetitions of the Prisoner’s Dilemma game, in which cooperative behavior—not confessing—emerges as a stable outcome. Axelrod & Hamilton, *supra*, at 1393.

2. Elinor Ostrom *Facts*, NOBELPRIZE.ORG, (2018) <https://www.nobelprize.org/prizes/economics/2009/ostrom/facts/> [<https://perma.cc/Z87D-L9BA>] (last visited Sept. 23, 2018).

3. ELINOR OSTROM, *GOVERNING THE COMMONS: THE EVOLUTION OF INSTITUTIONS FOR COLLECTIVE ACTION* (1990).

4. *Id.* at 18–21.

5. *Id.* at 59–65.

6. *Id.* at 104–42.

7. *Id.* at 18–21.

8. *Id.* at 59–65.

9. *Id.* at 104–42.

10. *Id.* at 88. (“[T]he populations in these locations have remained stable over long periods of time. Individuals have shared a past and expect to share a future. It is important for individuals to maintain their reputations as reliable members of the community. These individuals live side by side and farm the same plots year after year. They expect their children and their grandchildren to inherit their land.”); *see also* Ara Norenzayan & Azim F. Shariff, *The Origin and Evolution of Religious Prosociality*, 322 *SCI.* 58, 58 (2008) (arguing that religious groups show high levels of cooperation because of group stability).

11. Ernst Fehr & Simon Gächter, *Cooperation and Punishment in Public Goods Experiments*, 90 *AM. ECON. REV.* 980, 980–81 (2000).

12. Axelrod & Hamilton, *supra* note 1, at 1395; *see also* OSTROM, *supra* note 3, at 20 (“The few infractions that have occurred have been handled easily by the fishers at the local coffeehouse.”).

13. Axelrod & Hamilton, *supra* note 1, at 1395; *see also* Fehr & Gächter, *supra* note 11 at 984–85.

14. Jenny M. Lewis et al., *The How and Why of Academic Collaboration: Disciplinary Difference and Policy Implications*, 64 *J. HIGHER EDUC.* 693, 697–98 (2012).

being equal, the more open academics are to working with their colleagues, the more productive they tend to be.¹⁵ Faculty members must work together on governance, hiring, administrative matters and, most importantly, the work of research and discovery.¹⁶ The essence of cooperation in academia is the frequent and robust exchange of ideas and critiques, and research collaboration in pursuit of shared goals.¹⁷ Certainly, fighting and bickering, or shirking duties, is not cooperation, and is not conducive to collaboration.

Academic institutions are in fact structured to facilitate collaboration. Faculty members are placed in close physical proximity,¹⁸ provided with generous meeting spaces,¹⁹ and get to choose their own colleagues,²⁰ with whom they would presumably be more inclined to collaborate. And yet, collaboration across disciplines is uneven.²¹ Law faculties, if collaboration is measured by co-authorship, lag.²² This study surveyed all U.S. law journals in the Hein Online database, and found only 1,060 articles that were co-authored

15. See, e.g., Sooho Lee & Barry Bozeman, *The Impact of Research Collaboration on Scientific Productivity*, 35 SOC. STUD. SCI. 673, 693–94 (2005); James D. Adams et al., *Scientific Teams and Institutional Collaborations: Evidence from U.S. Universities, 1981–1999*, 34 RES. POL'Y 259 (2005); Harriet Zuckerman, *Nobel Laureates in Science: Patterns of Productivity, Collaboration, and Authorship*, 32 AM. SOC. REV. 391, 393–98 (1967); Miranda Lee Pao, *Collaboration in Computational Musicology*, 33 J. AM. SOC'Y INFORMATIONAL SCI. 38, 38–43 (1982); Nevenka Pravdić & Vesna Oluić-Vuković, *Dual Approach to Multiple Authorship in the Study of Collaboration/Scientific Output Relationship*, 10 SCIENTOMETRICS 259, 278 (1986); Réjean Landry et al., *An Econometric Analysis of the Effect of Collaboration on Academic Research Productivity*, 32 HIGHER EDUC. 283 (1996). But see Vicki L. Hesli & Jae Mook Lee, *Faculty Research Productivity: Why Do Some of Our Colleagues Publish More than Others?*, 44 PS: POL. SCI. & POL. 393, 396 (2011).

16. Derek J. de Solla Price & Donald Beaver, *Collaboration in an Invisible College*, 21 AM. PSYCHOLOGIST 1011, 1014 (1966) (“[T]here is a good correlation between the productivities and the amount of collaboration of the authors. The most prolific man is also by far the most collaborating . . .”); see also *infra* Part II.

17. See, e.g., Barry Bozeman et al., *Research Collaboration in Universities and Academic Entrepreneurship: The State-of-the-Art*, 38 J. TECH. TRANSFER 1, 3 (2013) (“We define collaboration as ‘social processes whereby human beings pool their human capital for the objective of producing knowledge.’”).

18. See, e.g., Peter Dizikes, *The Office Next Door*, MIT TECH. REV. (Oct. 25, 2011), <https://www.technologyreview.com/s/425881/the-office-next-door/> [<https://perma.cc/P6ZW-XASN>] (explaining how Nobel Laureate Robert Solow benefited, as a junior faculty member, from having an office across the hall from Nobel Laureate Paul Samuelson).

19. See, e.g., Kevin K. Washburn, *Elena Kagan and the Miracle at Harvard*, 61 J. LEGAL EDUC. 67, 71 (2011).

20. Jon W. Bruce & Michael I. Swygert, *The Law Faculty Hiring Process*, 18 HOUS. L. REV. 215, 264 (1981); William O. Brown, Jr., *University Governance and Academic Tenure: A Property Rights Explanation*, 153 J. INSTITUTIONAL & THEORETICAL ECON. 441, 456 (1997).

21. Lewis et al., *supra* note 14, at 693–94.

22. Tracey E. George & Chris Guthrie, *Joining Forces: The Role of Collaboration in the Development of Legal Thought*, 52 J. LEGAL EDUC. 559, 563–67 (2002).

by faculty members within the same law school,²³ out of the total of 105,832 total articles written over the eight-year sample period²⁴—a measly 1%.²⁵

Why, despite an institutional structure designed to facilitate collaboration, is it so hard to get law professors—who choose their own colleagues, it bears repeating—to work with each other? This article offers only a partial but important and surprising answer: tenure.²⁶ This article illustrates, using a game-theoretic model, how tenure inhibits the imposition of sanctions, undermining incentives to cooperate. In theory, tenure creates group stability which should lead to more cooperation. But in practice, tenure gives faculty members the ability to “check out”—minimize engagement in law school life—when faculty relations sour.²⁷

There is one partial saving mechanism for academic units: exit. Faculty members sometimes leave for another job, often at another university. Whereas defection makes cooperation difficult in most group settings, the possibility of losing colleagues may actually make academic units *more* cooperative, to a point.²⁸ Replacing departed colleagues is costly and time-consuming, as faculty hiring service is notoriously time-consuming.²⁹ Even disenchanted faculty members might be more collegial towards colleagues if they believe that a departure is possible, and that they may be called upon to do the hard work of replacing them.

This article presents a game-theoretic model of faculty cooperation, and provides some empirical evidence that the threat of faculty loss may actually *increase* faculty collegiality and collaboration. The institution of tenure not only dulls the incentives for tenured faculty to excel and produce,³⁰ but removes the most meaningful sanctions for non-cooperation, giving unhappy faculty members the freedom to engage in unproductive fighting and bickering, or

23. This article addresses the cooperation within a faculty, and so only measures within-faculty collaborations. Professors often collaborate with faculty at other institutions, but that does not speak to the propensity of faculty members to collaborate with their immediate colleagues.

24. E-mail from Adam Tramp, HeinOnline Technical Support, to Shi-Ling Hsu, (Feb. 7, 2018) (on file with author).

25. Co-authored articles that combined faculty from different law schools was much higher, at 24%, as discussed *infra* notes 64–68 and accompanying text.

26. Tenure is, of course, not unique to law faculties, so it is at most a partial explanation. A number of factors contribute to the propensity to collaborate that differentiate law faculties from other types of academic units. This article just addresses the effects of tenure and turnover on law faculties as a partial explanation of cooperation. See discussion *infra* notes 64–68.

27. See *infra* notes 101–132 and accompanying text.

28. An *excessive* loss of faculty, such that it is inevitable and consuming, would generate the uncooperative behavior predicted by game theory. This is discussed *infra* in sections III.C. and IV.B.

29. Bruce & Swygert, *supra* note 20, at 264.

30. See *infra* section III.A.

shirking, without fear of sanction.³¹ Meanwhile, the prospect of toiling or fighting with uncooperative colleagues, or picking up the slack for shirking colleagues, makes more appealing the option of changing jobs and moving. If exit is a credible threat, then it changes the calculus for the uncooperative faculty member: the daunting prospect of having to replace a lost colleague may actually impose some discipline. This article provides some empirical evidence that, contrary to the prevailing notion that group stability increases cooperation, academic units experience more cooperation if there is some threat of moderate, non-excessive instability.

I hasten to emphasize that this article is *not* a call or part of a campaign to abolish or curtail the granting of tenure at law schools or more broadly, institutions of higher learning. It is, however, an examination of an overlooked and counter-intuitive effect of tenure. In the interests of understanding intra-faculty dynamics, it is worth making a complete accounting of the costs and benefits of tenure. Part II of this article reviews the literature on cooperation, and the link to productivity. Part III of this article lays out the argument that tenure, while valuable for a number of vitally important reasons, undermines cooperation and enables antisocial behavior. Part IV sets forth the game-theoretic model illustrating how the threat of exit—a lateral move by a faculty member—may replace some of the discipline lost to the institution of tenure. Part V describes in detail the data sources used in this study, and sets out the empirical evidence supporting these hypotheses. Part VI concludes by suggesting some academic policies that might facilitate collaboration in law faculties, and possibly other academic units.

II. COOPERATION AND PRODUCTIVITY

Why do some organizations produce more innovation than others? The model of organizational creativity is Bell Labs, originally the research arm of telephone monopolist AT&T.³² Over its roughly eighty-five-year history, Bell Labs scientists developed the world's first solar photovoltaic energy cell,³³ communications satellite,³⁴ fiber optic cables,³⁵ cell phone system,³⁶ modern

31. See *infra* section III.B.

32. JON GERTNER, *THE IDEA FACTORY: BELL LABS AND THE GREAT AGE OF AMERICAN INNOVATION* 30–31 (2012).

33. *Id.* at 170–72.

34. *Id.* at 202–04.

35. *Id.* at 275–79.

36. *Id.* at 279–83.

operating system (UNIX),³⁷ modern computer language (C),³⁸ and the fundamental building block of modern electronics, the transistor.³⁹ Thirteen times a Bell Labs scientist has won or shared in a Nobel Prize in Physics.⁴⁰ That would rank Bell Labs, if it were a country, fourth behind only the United States, the United Kingdom, and Germany, and ahead of France, Japan, and the combined Soviet Union and Russia.⁴¹

What has been the secret to Bell Labs's remarkable record of creativity and innovation? The founding precept of Bell Labs was collaboration.⁴² In fact, Bell Labs's space was designed to maximize contact among its researchers.⁴³ Offices were spaced so that researchers, in order to reach restrooms and cafeterias, had to walk past other workspaces like "a magnet rolling past iron filings."⁴⁴ This active creation of opportunities for chance encounters was crucial in producing productive collaborations.⁴⁵ At the same time, Bell Labs created a culture of enrichment and curiosity.⁴⁶ Bell offered every employee, no matter how junior or senior, advanced graduate-level training in its Communications Development Training Program, or "Kelly College,"⁴⁷ where employees seeking to sharpen their technical skills would gather and share ideas.⁴⁸ What was surprising was how much senior scientists learned just by sharing their skills with junior employees.⁴⁹

These and other lessons in collaboration in organizational creativity have not been lost on institutions of higher learning and the governments that fund

37. *Id.* at 261.

38. *Id.*

39. *Id.* at 163–70.

40. Ryan Francis, *Nobel Prize Latest in Long Line for Bell Labs*, NETWORK WORLD, (Oct. 7, 2009, 1:00 AM), <http://www.networkworld.com/article/2869896/lan-wan/nobel-prize-latest-in-long-line-for-bell-labs.html> [<https://perma.cc/F6TN-2QBC>].

41. *Countries With the Most Nobel Prizes in the Field of Physics*, WORLD ATLAS, <https://www.worldatlas.com/articles/countries-with-the-most-nobel-laureates-in-the-field-of-physics.html> [<https://perma.cc/GC6D-5HN4>] (last visited Sept. 23, 2018).

42. GERTNER, *supra* note 32, at 134 ("So many of the wartime and post war breakthroughs—the Manhattan project, radar, the transistor—were clearly group efforts, a compilation of the ideas and inventions of individuals bound together with common purposes and complementary talents. And the phone system, with its almost unfathomable complexity, was by definition a group effort.")

43. *Id.* at 151.

44. *Id.* at 77.

45. Felichsim Kabo et al., *Shared Paths to the Lab: A Sociospatial Network Analysis of Collaboration*, 47 ENV'T & BEHAV. 57, 75–79 (2015).

46. GERTNER, *supra* note 32, at 153–54.

47. So named for the Bell Labs director that created the program, Mervyn Kelly. *Id.* at 153.

48. *Id.* at 153–54.

49. *Id.* at 154.

them.⁵⁰ Funding agencies like the National Science Foundation and the National Institutes of Health have reduced funding rates and increased grant amounts, creating incentives for larger research teams.⁵¹ Research “centers” have popped up on campuses to try and smash interested researchers together to collaborate in pursuit of those scarce research funds⁵² which, person-for-person, have in fact been more prolific than regular departments.⁵³ Universities have gradually become receptive to industry funding⁵⁴ which, while raising some governance questions,⁵⁵ have helped create fruitful university–industry collaborations.⁵⁶ Interdisciplinary research, which necessitates collaboration—and was also a pioneering hallmark of Bell Labs⁵⁷—has become a clarion call at research universities.⁵⁸

50. See, e.g., Andreas Schwab & William H. Starbuck, *Collegial “Nests” Can Foster Critical Thinking, Innovative Ideas, and Scientific Progress*, 14 STRATEGIC ORG. 167, 168–71 (2016); Giovanni Abramo et al., *Research Collaboration and Productivity: Is There Correlation?*, 57 J. HIGHER EDUC. 155, 156 (2009).

51. Bruce Alberts et al., *Rescuing US Biomedical Research From Its Systemic Flaws*, 111 PROC. NAT’L ACAD. SCI. U.S. 5773, 5775 (2014).

52. P. Craig Boardman & Elizabeth A. Corley, *University Research Centers and the Composition of Research Collaborations*, 37 RES. POL’Y 900, 900 (2008) (“Perhaps the singular feature that all university research centers, broadly defined, have in common is the intention to foster collaboration among researchers.”).

53. Branco L. Ponomarev & P. Craig Boardman, *Influencing Scientists’ Collaboration and Productivity Patterns Through New Institutions: University Research Centers and Scientific and Technical Human Capital*, 39 RES. POL’Y 613, 623 (2010) (“The results presented in this study suggest that affiliation with a university research center affects the behavior of affiliated faculty in ways consistent with the common emphases and goals in such center programs: increased productivity, collaboration . . . and interdisciplinarity.”).

54. Magnus Gulbrandsen & Jens-Christian Smeby, *Industry Funding and University Professors’ Research Performance*, 34 RES. POL’Y 932, 932 (2005); Yong S. Lee, *The Sustainability of University-Industry Research Collaboration: An Empirical Assessment*, 25 J. TECH. TRANSFER 111, 121–26 (2000).

55. Gulbrandsen & Smeby, *supra* note 54, at 933 (“Some are worried, others not, about the consequences of universities’ external orientation and changed funding base . . .”).

56. Lee, *supra* note 54, at 117–21. Research centers may also incorporate industry researchers into the research of an academic in a positive way that actual industry employment would not. James S. Dietz & Barry Bozeman, *Academic Careers, Patents, and Productivity: Industry Experience as Scientific and Technical Human Capital*, 34 RES. POL’Y 349, 362–63 (2005).

57. GERTNER, *supra* note 32, at 134 (“[As Bell Labs Nobel Laureate William] Shockley would later point out, that by the middle of the twentieth century the process of innovation in electronics had progressed to the point that a vast amount of multidisciplinary expertise was needed to bring any given project to fruition.”).

58. See, e.g., DIANA RHOTEN, NAT’L SCI. FOUND., A MULTI-METHOD ANALYSIS OF THE SOCIAL AND TECHNICAL CONDITIONS FOR INTERDISCIPLINARY COLLABORATION (2003), http://ssrc-cdn1.s3.amazonaws.com/ormuploads/new_publication_3/%7B91820A2E-B970-DE11-BD80-001CC477EC70%7D.pdf [<https://perma.cc/7GZM-DM4U>].

It is thus a source of some irritation to academic administrators that not all units on campus have joined in the trend towards working in cooperative teams. Scientific and technical disciplines that may require sophisticated equipment for research have moved quickly to collaborative research in order to share in the costs of expensive laboratories.⁵⁹ So, too, have quantitative social sciences, such as psychology and economics.⁶⁰ Other fields, such as English and Literary Studies, still feature solo researchers as the norm.⁶¹ Humanities and philosophy also evidently do not harbor “cultures” of collaboration.⁶² Anthropology is apparently such a fractious discipline that people just can’t get along with each other enough to collaborate.⁶³

Generally speaking, collaboration among law faculty is low relative to other types of academic departments,⁶⁴ and intra-faculty collaboration—specifically between professors at the same institutions—is very low.⁶⁵ As noted above,⁶⁶ in the 2005–2013 time period spanned by this study, only 1% of all articles in the Hein Online database had more than one author from the same faculty. Forty law schools—more than one-fifth of all U.S. law schools—had zero internally co-authored articles at all for eight years.⁶⁷ Comparing apples to apples, this study estimates that the rate of law journal co-authorship of any kind—not just intra-faculty—was about 24%,⁶⁸ a much higher figure than for intra-faculty co-authorship.⁶⁹ But that still pales in comparison with the co-

59. NAT’L SCI. BD., SCIENCE AND ENGINEERING INDICATORS 2016, ch.5, at 31–33 (2016), <https://www.nsf.gov/statistics/2016/nsb20161/#/downloads/report> [<https://perma.cc/M9EM-ZLJV>]; Adams et al., *supra* note 15, at 259–60.

60. Aidan Hollis, *Co-authorship and the Output of Academic Economists*, 8 LABOUR ECON. 503, 514 (2001) (economics); Blaise Cronin et al., *A Cast of Thousands: Co-authorship and Sub-authorship Collaboration in the 20th Century as Manifested in the Scholarly Journal Literature of Psychology and Philosophy*, 54 J. AM. SOC’Y INFO. SCI. & TECH. 855, 860 (2003) (Table 3, showing increasing rates of multiple authorship in Psychology); John M. McDowell & Michael Melvin, *The Determinants of Co-authorship: An Analysis of the Economics Literature*, 65 REV. ECON. & STAT. 155, 155 (1983).

61. Elizabeth Leane et al., *Co-authorship Trends in English Literary Studies, 1995–2015*, 44 STUD. HIGHER EDUC. 503, 514 (2017) (showing co-authorship rate in literary studies of 4%).

62. Lewis et al., *supra* note 14, at 699–700.

63. *Id.*

64. George & Guthrie, *supra* note 22, at 563–67.

65. E-mail from Adam Tramp, *supra* note 24.

66. See *supra* notes 23–25 and accompanying text.

67. E-mail from Adam Tramp, *supra* note 24.

68. This figure includes articles in U.S. law journals that are co-authored by non-professorial lawyers, such as practitioners. This is in line with a previous estimate by George & Guthrie, *supra* note 22, at 562–66, which found co-authorship rates in “elite” law reviews and all law reviews to be below 20%.

69. E-mail from Adam Tramp, *supra* note 24.

authorship rates of 70%–90% in other fields.⁷⁰ Collaboration and cooperation can take many forms, but if co-authorship is an indicator, then the legal academy appears not to be trending that way.⁷¹

This is something of a shame for the legal academy, because considerable research supports the proposition that faculty members who collaborate with their colleagues are more prolific researchers⁷² and more successful teachers.⁷³ The very essence of collegiality is the immediacy of feedback and exchange that quickly distills ideas. Collaboration also implies some division of labor, whereby different faculty members may bring different and complementary skills to a research endeavor.⁷⁴ While many researchers still make great discoveries working solo, as a statistical matter, collaboration is a robustly positive predictor of creative productivity.⁷⁵ Co-authored papers are more often cited than sole-authored papers.⁷⁶ It could be that causality runs in the other direction: that co-authorship is really a mechanism for publishing more.⁷⁷ But even accounting for the fact that co-authorship implies some division of credit for a co-authored article, the very practice of co-authorship tends to increase the page productivity, or “publication efficiency” of faculty researchers.⁷⁸

III. TENURE AND UNCOOPERATIVE BEHAVIOR

As emphasized above, this article is *not* a call or part of a campaign to abolish or curtail the granting of tenure at institutions of higher learning. I only

70. See *supra* notes 59–60; George & Guthrie, *supra* note 22, at 566.

71. It is worth noting that almost all law teaching materials, including casebooks and treatises, are co-authored. This is certainly a form of collaboration, and an important one for an academy that still delivers legal education in largely a lecture format. George & Guthrie, *supra* note 22, at 559.

72. See sources cited *supra* note 15.

73. Lee, *supra* note 54, at 124 (showing benefits of industry collaboration to teaching through statistical results); Min-Wei Lin & Barry Bozeman, *Researchers' Industry Experience and Productivity in University-Industry Research Centers: A "Scientific and Technical Human Capital" Explanation*, 31 J. TECH. TRANSFER 269, 282–83 (2006).

74. Andy H. Barnett et al., *The Rising Incidence of Co-authorship in Economics: Further Evidence*, 70 REV. ECON. & STAT. 539, 541 (1988); McDowell & Melvin, *supra* note 60, at 156.

75. See sources cited *supra* note 15.

76. F. Narin et al., *Scientific Co-Operation in Europe and the Citation of Multinationally Authored Papers*, 21 SCIENTOMETRICS 313, 322–23 (1991); G. Lewison & P. Cunningham, *Bibliometric Studies for the Evaluation of Trans-national Research*, 21 SCIENTOMETRICS 223, 242 (1991); Adams et al., *supra* note 15, at 260.

77. McDowell & Melvin, *supra* note 60, at 155.

78. Garey C. Durden & Timothy J. Perri, *Co-authorship and Publication Efficiency*, 23 ATLANTIC ECON. J. 69, 74 (Table 2) (1995); Joe C. Davis & Debra Moore Patterson, *Determinants of Variations in Journal Publication Rates of Economists*, 45 AM. ECONOMIST 86, 89 (2001); Kellie L. Maske et al., *Determinants of Scholarly Productivity Among Male and Female Economists*, 41 ECON. INQUIRY 555, 562 (2003).

mention here in passing a body of work that has come to the defense of tenure in the past, against attacks that have sometimes been a bit too casual in their inferences,⁷⁹ and which sometimes belie a distinctly political axe to grind.⁸⁰

Tenure is necessary to allow the incubation of ideas on long time frames. Academic units undertake the research eschewed by industry, government, and other research bodies, because these less insulated institutions only undertake research that can be translated into tangible and monetizable benefits over a relatively short time frame.⁸¹ In non-academic sectors, there is pressure to undertake projects from which they can capture most of the rents of the resultant intellectual property.⁸² Much research in academic institutions is *by design* not susceptible of immediate practical application, but is basic, fundamental research that may be rich in positive spillovers.⁸³ Were research decisions not insulated by tenure, academic research could well look much like industrial research, with nobody available to undertake basic research.⁸⁴ It is also easy to imagine how tenure protects researchers from inefficient “ravages and vagaries . . . of institutional politics inside universities.”⁸⁵ Moreover, notwithstanding the numerous circulating polemics about of lazy professors,⁸⁶ tenure is actually an efficient division of labor given the highly specialized

79. See, e.g., Gordon Tullock, *Corruption Theory and Practice*, 14 CONTEMP. ECON. POL’Y 6, 9 (1996) (“Normally, the argument for tenure is on the grounds that tenure increases the difficulty for politically powerful people to pick on people with independent minds. This is basically ridiculous since the people who have independent thoughts tend to be young.”).

80. See, e.g., THOMAS SOWELL, *INSIDE AMERICAN EDUCATION: THE DECLINE, THE DECEPTION, THE DOGMAS*, 229 (1993) (“Since the 1960s, at least, the conformity of the academic world has been an *internally* imposed conformity of the left, culminating in the “political correct” fashions of the 1980s and 1990s. Tenure and academic freedom have not protected individual diversity of thought on campus but instead have protected those who choose to impose the prevailing ideology through classroom brainwashing of students and storm trooper tactics against outside speakers who might challenge this ideology.”).

81. Richard B. McKenzie, *In Defense of Academic Tenure*, 152 J. INSTITUTIONAL & THEORETICAL ECON. 325, 339 (1996) (noting that abolition of tenure would “[r]educe the willingness of faculty . . . to undertake long-term, risky research . . .”).

82. Philippe Aghion & Peter Howitt, *Research and Development in the Growth Process*, 1 J. ECON. GROWTH, 49, 50 (1996) (“Research produces *fundamental* knowledge, which by itself may not be useful but which opens up windows of opportunity, whereas the purpose of development is to generate *secondary* knowledge, which will allow those opportunities to be realized.”).

83. McKenzie, *supra* note 81, at 330 (noting the public goods nature of research).

84. *Id.* at 339.

85. *Id.* at 326.

86. Ralph S. Brown & Jordan E. Kurland, *Academic Tenure and Academic Freedom*, LAW & CONTEMP. PROBS., Summer 1990, at 325, 327 (1990), (“The attacks tend to be hit-and-run”) (citing *The Tenure Temptation: Don’t Give Professors Lifetime Jobs*, THE ECONOMIST, Feb. 28, 1987, at 15); see also, SOWELL, *supra* note 80, at 229; see generally ROGER KIMBALL, *TENURED RADICALS: HOW POLITICS HAS CORRUPTED OUR HIGHER EDUCATION* (1990).

nature of most academic research, and probably the best means of evaluating long-term value.⁸⁷ Finally, it is important to note that problems with monitoring performance of professors is not at all unique to the academy. Whenever and wherever sophisticated and complicated work is carried out, information asymmetries create tensions between principal and agent that are not always resolved satisfactorily.⁸⁸ Academic tenure is just the imperfect resolution of these tensions in the academic labor market, a price paid for the enormous societal benefits produced by academic research.⁸⁹

This article is also limited to an examination of one effect of tenure on law faculties, as opposed to academic units generally. Other types of academic units grant tenure to faculty and still experience very high rates of research collaboration.⁹⁰ There are a number of institutional and structural reasons for that. As noted above, in some fields productive collaboration yields funding and other benefits that are highly sought after even after tenure.⁹¹ Access to laboratories and instrumentation are vital to the research of many technical and scientific disciplines, necessitating collaboration in a way that the legal academy does not.⁹² This article only offers one explanation for why some law faculty forego cooperation, and does not seek to generalize to other fields of study.

A. *The Effect of Tenure on Faculty Behavior—Productivity*

All that said, it still important to understand intra-faculty dynamics through a lens that incorporates a condition as important as tenure. Even thoughtful and nuanced treatments concede that tenure creates incentives for shirking or

87. Michael S. McPherson & Morton Owen Schapiro, *Tenure Issues in Higher Education*, J. ECON. PERSP., Winter 1999, at 85, 92–94; Michael S. McPherson & Gordon C. Winston, *The Economics of Academic Tenure: A Relational Perspective*, 4 J. ECON. BEHAV. & ORG. 163, 164–65 (1983).

88. See, e.g., JEAN-JACQUES LAFFONT & DAVID MARTIMORT, *THE THEORY OF INCENTIVES: THE PRINCIPAL-AGENT MODEL* 29 (2002); McKenzie, *supra* note 81, at 330 (“The more sophisticated, esoteric, and varied the job to be done, the more likely managerial control will be relegated to the workers themselves.”).

89. Economists have estimated the economic benefits of different economic sectors, and found that academic medical research alone—not counting any other academic fields—has contributed \$3.2 trillion every year since 1970. Kevin M. Murphy & Robert H. Topel, *The Value of Health and Longevity*, 114 J. POL. ECON. 871, 872 (2006).

90. See *supra* Part II.

91. See, e.g., Lee & Bozeman, *supra* note 15, at 683 (“[E]xperimental scientists often use large and costly instrumentation that requires a large number of collaborators.”); Adams et al., *supra* note 15, at 283.

92. See, e.g., NAT’L SCI. BD., *supra* note 59, at ch.5, 45–46.

fighting.⁹³ It is important to understand the negative effects of tenure not to justify its abolition, but for academic institutions to develop ways to simulate more dynamic work environments.

To begin with, tenure largely removes the most serious sanction for bad behavior, at least from the perspective of administrators charged with managing academic units: dismissal. Different institutions have different standards, but the most common restriction on dismissal allows it only for “adequate cause,”⁹⁴ language that has proven to be a high bar for removal.⁹⁵ While lurid anecdotes of academic fecklessness or miscreancy⁹⁶ prove much less than supposed, the security of an effective lifetime appointment must undeniably create some complacency at some point, for almost all academics.⁹⁷ Shirking in research, teaching, or service is common enough that it would surely be astounding to find an academic that claims to be unfamiliar with it.⁹⁸

Indeed, as a general matter, post-tenure productivity is lower than pre-tenure productivity.⁹⁹ The evidence is fairly robust that after a certain point, academics become less productive as they age, both in terms of quantity of research and writing and influence.¹⁰⁰ A study by Michael Swygert and Nathaniel Gozansky of publications by law faculty members at the Full Professor rank found that senior faculty members publish at low rates relative to younger colleagues.¹⁰¹ They found that from 1980 to 1983 (admittedly a very different time for the legal academy), 1,950 senior law faculty published 2,992 articles, an average of 1.53 over the four-year period.¹⁰² Over 20% had only one, and over 44% had *zero* publications.¹⁰³ As is the case with other

93. McKenzie, *supra* note 81, at 327 (“Professors do, at times (if not often), exploit tenure by shirking their duties in the classroom, in their research, and in their service to their universities.”).

94. Brown & Kurland, *supra* note 86, at 325.

95. *Id.* at 344.

96. See, e.g., Napp Nazworth, *Analysis: Problem with Higher Ed is Not Lazy Professors; A Response to Gov. Scott Walker*, THE CHRISTIAN POST, (Feb. 11, 2015, 8:08 AM), <https://www.christianpost.com/news/analysis-problem-with-higher-ed-is-not-lazy-professors-a-response-to-gov-scott-walker-133887/> [<https://perma.cc/UJM9-HPYV>].

97. Brown, *supra* note 20, at 452–53.

98. McKenzie, *supra* note 81, at 327 (“Professors do, at times (if not often), exploit tenure by shirking their duties in the classroom, in their research, and in their service to their universities.”).

99. John W. Holley, *Tenure and Research Productivity*, 6 RES. HIGHER EDUC. 181, 185–90 (1977).

100. See, e.g., Sharon G. Levin & Paula E. Stephan, *Research Productivity Over the Life Cycle: Evidence from Academic Scientists*, 81 AM. ECON. REV. 114, 126 (1991).

101. See Michael I. Swygert & Nathaniel E. Gozansky, *Senior Law Faculty Publication Study: Comparisons of Law School Productivity*, 35 J. LEGAL EDUC. 373 (1985).

102. *Id.* at 381 tbl.1.

103. *Id.*

fields, a fairly small number of scholars write a disproportionately large fraction of the papers.¹⁰⁴ But the numbers for senior legal scholars are striking: 297 scholars, representing just over 10% of this group, accounted for 55% of all output.¹⁰⁵

To some extent, a decline in productivity with age is a product of a normal human life cycle.¹⁰⁶ As academics age, they take on more activities outside of their academic life.¹⁰⁷ As academics age, they often rebalance professional and personal needs.¹⁰⁸ While an enlightened employer might accommodate or even encourage some of these life adjustments, tenure would seem to be an odd mechanism for doing so. Instead of tailoring a remedy to help a faculty member through a specific problem, tenure grants a fairly open-ended license for professors to substitute away from academic work and towards other priorities, if they so choose.¹⁰⁹

While teaching is a harder quality to measure than scholarly output, there is at least some evidence that tenure may not, as supposed,¹¹⁰ make for better teachers. A study conducted at Northwestern University found that “contingent faculty”—non-tenured or non-tenure-track faculty—produced better undergraduate learning outcomes in terms of inducing students to take more subject courses and do better subsequent coursework than tenured and tenure-track colleagues.¹¹¹ The driver for that result? The bottom quartile of tenured and tenure-track teachers provided much less “value-added” than their contingent faculty colleagues.¹¹²

104. Paul Ramsden, *Describing and Explaining Research Productivity*, 28 HIGHER EDUC. 207, 223 (1994) (“[T]he average publication rate of the Australian academic is low, while its variability is high. Most publications are produced by a small proportion of the total number of staff. . . . These findings reflect those reported from other countries.”); Hollis, *supra* note 60, at 514 (more than half of all economists publish zero articles in a given year).

105. Swygart & Gozansky, *supra* note 101, at 381.

106. Roger G. Baldwin et al., *Faculty in the Middle Years: Illuminating an Overlooked Phase of Academic Life*, 29 REV. HIGHER EDUC. 97, 106 (2005).

107. *Id.* at 104.

108. *Id.* at 104–05.

109. Aloysius Siow, *Tenure and Other Unusual Personnel Practices in Academia*, 14 J. L. ECON. & ORG. 152, 170 (1998) (“Low-powered incentives, including tenure, may at the margin induce professors to shirk in their responsibilities.”).

110. Ronald G. Ehrenberg & Liang Zhang, *Do Tenured and Tenure-Track Faculty Matter?*, 40 J. HUM. RESOURCES 647, 657 (2005).

111. David N. Figlio et al., *Are Tenure Track Professors Better Teachers?*, 97 REV. ECON. STAT. 715, 723 (2015).

112. *Id.* at 723.

B. *The Effect of Tenure on Faculty Behavior—Shirking or Fighting*

Tenure also helps create a potentially long-lived group stasis for an academic unit. Moving and changing jobs is expensive, and tenure at least ensures a well-paying job in a familiar environment. Conventional game theory would suggest that this would make for a more cooperative group, since everyone has to get along for a long time. As noted in the introduction, cooperation games such as the Prisoner's Dilemma model the elusiveness of cooperation; but repetitions of the Prisoner's Dilemma allow for sanctions for non-cooperation and, eventually, coordination.¹¹³ Tenure has in fact been suggested as a mechanism to increase cooperation, because fighting or shirking faculty members must still deal with colleagues, eventually.¹¹⁴

However, it is also possible that with tenure, members of a faculty are just *stuck* with one another. Because tenure ensures a well-paying, flexible job in a familiar environment, even unpopular or unhappy faculty members might be induced to stay on. Weighed against the costs of changing jobs and transitioning to a new environment—something not easily undertaken for older professors or those with families—professors may choose to stay and tolerate mild to moderate levels of unhappiness.

Tenure also allows discontented faculty to respond to workplace unhappiness by avoiding it, or shirking.¹¹⁵ Once it starts, shirking begets shirking.¹¹⁶ Many academic units seem to have simply resigned to accepting that some of it is endemic to the academic enterprise.¹¹⁷ More benignly, most faculty seem to accept that their human colleagues have peaks and valleys in their lives, and that outstanding colleagues one year may be shirkers the next, and vice versa.¹¹⁸ But when a faculty is chronically contentious, the temptation

113. Axelrod & Hamilton, *supra* note 1, at 1393.

114. McKenzie, *supra* note 81, at 334 (“Tenure is a means of putting some (minimum) limits on political infighting.”).

115. Loreleigh Keashly & Joel H. Neuman, *Faculty Experiences with Bullying in Higher Education: Causes, Consequences, and Management*, 32 ADMIN. THEORY & PRACTICE 48, 54 (2010).

116. See, e.g., Michael I. Swygert & Nathaniel E. Gozansky, *The Desirability of Post-Tenure Performance Reviews of Law Professors*, 15 STETSON L. REV. 355, 367 (1986) (“[I]nactivity breeds inactivity.”).

117. See, e.g., William L. Prosser, *Lighthouse No Good*, 1 J. LEGAL EDUC. 257, 259 (1948) (“[T]he dean has foisted upon his law school a loafer, a lazybones who finds that a modest salary with six or eight hours of teaching a week and three months of vacation every summer is the life of his dreams, who goes fishing, who plays golf and grows roses, who takes a good long nap every day after lunch and two hours for lunch before his nap, and never does anything at all. There is no law school, no matter how distinguished its reputation, that has not numbered on its faculty some such men as these. . . . The tragedy is that nothing can ever be done about it.”).

118. Swygert & Gozansky, *supra* note 116, at 366 (citing examples of family death, divorce, or illness as reasons for a break in productivity).

is to just avoid faculty life as much as possible, becoming a chronic shirker.¹¹⁹ And again, dismissal of tenured faculty only for adequate cause¹²⁰ is a high standard that is rarely met, thereby licensing shirking.¹²¹

Finally, tenure allows faculty to respond to workplace unhappiness not by avoiding it, but by antisocial behavior. Indeed, some have suggested that the stasis induced by the granting of tenure just multiplies the opportunities for conflict to arise within the faculty.¹²² Whereas individual faculty may give relatively new colleagues the benefit of the doubt, colleagues that have irritated each other for years and decades have a way of elevating their disputes, even over petty grievances. Tenure shields much of this behavior, so that irritating or offensive behavior is not addressed except in the most egregious cases.¹²³ Venal academic politics is the stuff of lampoon: a widely-cited quip often mistakenly attributed to Henry Kissinger holds that “academic politics is the most vicious and bitter form of politics, *because* the stakes are so small.”¹²⁴

Faculties also fight over less petty matters, such as funding,¹²⁵ hiring,¹²⁶ promotion and tenure,¹²⁷ and teaching loads.¹²⁸ In the grand scheme of things, none of these dramatically affect the material lives of faculty, but they do bear heavily on faculty job satisfaction.¹²⁹ The academy often draws people who demand high job satisfaction as their price for salaries is lower than their peers

119. Keashly & Neuman, *supra* note 115, at 54.

120. Brown & Kurland, *supra* note 86, at 325.

121. *Id.* at 328.

122. Keashly & Neuman, *supra* note 115, at 53 (“When bullying/mobbing occurs, it tends to be long-standing.”); McKenzie, *supra* note 81, at 339.

123. One professor who had engaged in a physical altercation with a colleague, and whose department colleagues unanimously signed a letter requesting his dismissal, was instead transferred to another department. *Huang v. Bd. of Governors of the Univ. of N.C.*, 902 F.2d 1134, 1136–37 (4th Cir. 1990).

124. *Transcript of Remarks of Henry Kissinger at the 14th Annual John M. Ashbrook Memorial Dinner, Ashland University*, (Sept. 11, 1997) <http://ashbrook.org/events/kissinger-transcript/> [<https://perma.cc/2VJX-HA7W>] (“I formulated the rule that the intensity of academic politics and the bitterness of it is in inverse proportion to the importance of the subject . . .”). Actually, the original observation was first made by political science professor Wallace Stanley Sayre. Allen L. Otten, *Politics and People*, WALL ST. J., Dec. 20, 1973, at 14 (emphasis added).

125. James C. Hearn & Melissa S. Anderson, *Conflict in Academic Departments: An Analysis of Disputes Over Faculty Promotion and Tenure*, 43 RES. HIGHER EDUC. 503, 507 (2002).

126. See, e.g., Michael Stokes Paulsen, *Reverse Discrimination and Law School Faculty Hiring: The Undiscovered Opinion*, 71 TEX. L. REV. 993, 993 (1992) (“[M]y friends and new colleagues suggested I write a short article explaining how considerations of race and gender may have figured in my own experience No fool I, I declined to bite the bait.”).

127. Hearn & Anderson, *supra* note 125, at 520–21.

128. *Id.* at 510.

129. Brown, *supra* note 20, at 442.

in industry.¹³⁰ Staying longer in a job may indeed, for people who place a high value on job satisfaction, mean they are highly satisfied. But it could also mean that they are engaging in antisocial work behavior.¹³¹ The cycle is a vicious one, because the response to antisocial work behavior could be to shirk,¹³² sending the faculty down a spiral of chronic uncollegiality.

C. The Possibility of Exit

What might make faculty members more accommodating and tolerant of their colleagues? One possibility, introduced in this article, is that some faculty may simply leave. Some may retire, some may make a lateral move to another law school, and some may leave the academic profession entirely. Lateral movement is easier for law professors than it is in other academic disciplines that include large setup costs, such as the costs of establishing laboratories with expensive equipment.¹³³ Whatever the reason, the stakes and the motivation for fighting are greatly lowered if targets of animosity remove themselves from the faculty.

Perhaps even more importantly, the loss of a faculty colleague necessitates her replacement. Faculty appointments are notoriously time-consuming.¹³⁴ Even after undertaking the effort to replace a departed colleague, there is no guarantee that the replacement will be any more pliable than the departed colleague.

With all that in mind, it is easy to see how a moderate amount of faculty turnover could be the release valve to diffuse tensions that build up over the course of time. No longer would faculty members simply be *stuck* with each other. The accumulation of petty insults over time gives way to expedience and to a desire to move forward with a modified roster of colleagues. Perceived slights are easier to bear in shorter-term relationships.

There are limits to turnover as a salve for faculty strife. *Excessive* turnover—so much so that there is no effective way to prevent it—would put the faculty right back into the original Prisoner's Dilemma, with no

130. Keith A. Bender & John S. Heywood, *Job Satisfaction of the Highly Educated: The Role of Gender, Academic Tenure, and Earnings*, 53 SCOTTISH J. POL. ECON. 253, 259 tbl.1 (2006) (showing higher salaries but lower job satisfaction overall and for most categories).

131. Michelle K. Duffy et al., *Positive Affectivity and Negative Outcomes: The Role of Tenure and Job Satisfaction*, 83 J. APPLIED PSYCHOL. 950, 952 (1998).

132. Keashly & Neuman, *supra* note 115, at 54.

133. Bruce & Swygert, *supra* note 20, at 222–23 (noting the interchangeability of positions and skills).

134. *Id.* at 264.

cooperation.¹³⁵ If the loss of colleagues was *inevitable*, then there truly would be no point in investing in a collegial relationship, and no point in cooperating.

There is thus some optimal point at which faculty turnover imposes just enough discipline so that faculty colleagues will make some effort not to unnecessarily alienate their colleagues, but not too much that it becomes discouraging. Some moderate amount of turnover would pose a credible threat of exit for some of the faculty members, and help refresh faculty rosters to avoid the stasis that fosters conflict. It is the *threat* of losing colleagues that keeps faculty members in line; *actually* losing too many of them would simply be deflating.

D. Local Quality of Life

A higher local quality of life outside of the law school may enhance productivity by increasing happiness, but may also represent higher opportunity costs for spending time on teaching or scholarship. Academics, too, grapple with work-life balance.¹³⁶ Counter-intuitively, I hypothesize that a higher local quality of life actually leads to a *lower* amount of time spent on academic affairs and, because that could be viewed as shirking by colleagues, would depress collegiality.

Criteria for something as amorphous as “quality of life” is a fraught exercise. In this article, it is meant as some subjective but measurable quality of nonwork life. Cultural and recreational opportunities, school quality, environmental quality, and health outcomes are all factors that influence where people choose to live (if they have a choice), and are weighed against professional considerations. But people weigh these factors in wildly different ways, giving rise to a plethora of ways to purport to measure “quality of life.” Nevertheless, many surveys and studies attempt to rank or rate cities and regions for local quality of life, however that is defined, as a response to a demand for information about how well people in a place live outside of their work lives.¹³⁷

135. Gibbons, *supra* note 1, at 2–4.

136. Jung Cheol Shin & Jisun Jung, *Academics Job Satisfaction and Job Stress Across Countries in the Changing Academic Environments*, 67 HIGHER EDUC. 603, 603–04 (2014).

137. See, e.g., 2018 *Quality of Life Rankings*, MERCER (Mar. 20, 2018), <https://mobilityexchange.mercer.com/Portals/0/Content/Rankings/rankings/qol2017e784512/index.html>; Francesca Levy, *America's Most Livable Cities*, FORBES (Apr. 29, 2010), https://www.forbes.com/2010/04/29/cities-livable-pittsburgh-lifestyle-real-estate-top-ten-jobs-crime-income_slide_2.html?thisspeed=25000#161e59646a99 [<https://perma.cc/84RK-H69V>]; Lianna Brinded, *The 23 Cities With the Best Quality of Life in the World*, BUS. INSIDER (Mar. 14, 2017), <http://www.businessinsider.com/mercer-2017-quality-of-living-worldwide-city-rankings-2017-3>

The local quality of life can depress faculty collegiality and cooperation for two reasons. First, cultural and recreational opportunities compete with law school callings for an individual faculty member's time. If the enjoyment of local amenities rises to the level at which it is perceived as to shirking at the law school, collegiality and collaboration erode.¹³⁸ As everyone recognizes, academic life is an interactive affair, so that shirking begets shirking.¹³⁹ Second, a high local quality of life may serve to deter job changes to other law schools, causing malcontented faculty members to stay on and either sow discontent or put up with it.¹⁴⁰ A high local quality of life effectively acts like tenure, giving people a reason to settle for a suboptimal work environment.

It could also be that larger urban areas have more opportunities for consulting and other income-generating activity outside of law school. In the Swygert and Gozansky study, faculties that languished in terms of senior faculty output were disproportionately located in large urban and governmental centers, suggesting that some have chosen to undertake consulting or other work.¹⁴¹ Under those circumstances, tensions among faculty would also inevitably arise, just as it would with faculty members shirking so they could enjoy local amenities.

It should not be surprising that tenured faculty members strike their work-life balances differently. It is almost inevitable that disparities in contribution to faculty life emerge.¹⁴² It would actually be extraordinary if this were not the case, which could explain the pervasiveness of faculty discontent.¹⁴³

IV. A GAME-THEORETIC MODEL

This part sets out a game-theoretic model of cooperation and exit. The model makes the simplifying assumption that players have identical payoffs for fighting, cooperating, acquiescing, and leaving. Of course, preferences are heterogeneous among different individual members within a faculty. A fuller model might account for preference heterogeneity, as does one model of marital

[<https://perma.cc/3DRT-XHGD>]; *125 Best Places to Live in the USA*, U.S. NEWS & WORLD REP. (June 20, 2017), <https://realestate.usnews.com/places/rankings/best-places-to-live>.

138. See *infra* tbl.1b.

139. Swygert & Gozansky, *supra* note 116, at 367.

140. See *infra* tbl.1b.

141. Swygert & Gozansky, *supra* note 101, at 394.

142. Shin & Jung, *supra* note 136, at 603–04.

143. Hearn & Anderson, *supra* note 125, at 505 (citing J. VICTOR BALDRIDGE, *POWER AND CONFLICT IN THE UNIVERSITY* (1971) (“Baldrige . . . was among the first to highlight [the] pervasiveness [of conflict] . . . in contemporary higher education, but there is evidence that conflict has been a part of academic life since ancient times . . .”).

relations.¹⁴⁴ This simplified model, however, is sufficient to illustrate the narrower assertion made in this article, which is that cooperation could be affected by the prospect of exit.

A. A Hawk-Dove Model of Cooperation

Consider a simple two-person game-theoretic model of two faculty members in an academic unit.¹⁴⁵ In figure 1 below, each of two players A and B have the choice of “fighting” (F) or “cooperating: (C). By fighting, I mean actions within the academic unit that are on net destructive, but advantageous to the narrower preferences of the fighter. For example, a faculty faction could argue for hiring more colleagues in their substantive area, or their methodological area, such as Law and Economics¹⁴⁶ or Critical Legal Studies.¹⁴⁷ By cooperating, I mean actions that may compromise the narrow preferences of the individual members, but on net, serve the interests of the academic unit as a whole. So for example, a faculty faction of Law and Economics scholars or Critical Legal Studies scholars may refrain from hiring one more of their own to address an agreed-upon need for someone to teach Civil Procedure. Obviously, violent differences of opinion can and do exist with respect to what is a “narrow” interest and what serves the broader interest of the academic unit as a whole. Law and Economics and Critical Legal Studies scholars could argue sincerely and in good faith that the best interests of the law school would be served by hiring one of their own. It can obviously be difficult to distinguish between good faith and self-serving motivations, but it is sufficient for purposes of this article to observe that interests conflict along these lines, and considerable faculty conflict can occur over these issues.¹⁴⁸

144. See, e.g., Marilyn Manser & Murray Brown, *Marriage and Household Decision-Making: A Bargaining Analysis*, 21 INT’L ECON. REV. 31 (1980) (model of heterogeneous preferences in a marital relationship and household decision-making).

145. Academic units obviously consist of more than two members but the value of this model is in illustrating types of responses to types of behavior. For example, if factions form in a law faculty, and are deemed to be pursuing self-serving goals that are viewed by others as being detrimental to the institution, then a likely response would be another faction pushing back, or fighting in response to fighting. Likewise, shirking begets more shirking. There are always some faculty members that are willing (or perhaps forced!) to take up the slack left by shirkers, but shirking by some breeds resentment that must certainly decrease the amount or quality of work done by the remaining non-shirkers.

146. Law and Economics is a trans-substantive methodology of analyzing legal doctrine through economic analyses, drawing heavily on economic efficiency as a normative principle. For a description, see RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW* 23–28 (6th ed. 2003).

147. Critical Legal Studies is a trans-substantive methodology for critically analyzing legal doctrine and institutions. For a brief description of Critical Legal Studies, see Mark Tushnet, *Critical Legal Studies and Constitutional Law: An Essay in Deconstruction*, 36 STAN. L. REV. 623 (1984).

148. Hearn & Anderson, *supra* note 125, at 504.

Fig. 1

		B	
		F	C
A	F	3 3	<u>8</u> <u>4</u>
	C	<u>4</u> <u>8</u>	7 7

The most favorable outcome from the group standpoint is C-C, cooperation by both A and B. When individuals work together, their joint work product is likely to be greater, or at least more efficiently produced, in comparison with a work environment beset by infighting.¹⁴⁹ In figure 1, joint cooperation produces individual payoffs of 7 each for a group total of 14. However, if either player chooses to fight—over appointments, over promotion or tenure, over administrative matters, over anything—then it may garner a slightly higher payoff (8), and impose upon the other a lower payoff (4), if the other does not retaliate, or fight back. Fighting and getting the desired outcome is assumed to be *slightly* advantageous for the fighter, but *very* disadvantageous for the non-fighter. While the fighter will get what she wants, it will come at the cost of the fighting itself, which is time-consuming. The non-fighter suffers an additional loss in terms of losing some battle over a substantive issue, and having the faculty move in a direction inconsistent with her preferences.

The unambiguously worst outcome is one in which both fight. Not only does nobody get what they want, but time and energy is spent fighting. Thus, fighting as a response to fighting yields an individual payoff even lower than that of cooperating.

As depicted, this is a “Hawk-Dove” game, also known as a “game of chicken.”¹⁵⁰ The paradigmatic story used to illustrate this game is one in which two teenage boys drive a car at a high speed at each other, and the party that swerves to avoid a collision is deemed to have “lost.”¹⁵¹ This game form illustrates the fragility of cooperation and the advantages of aggression.¹⁵²

149. See sources cited *supra* note 15.

150. TODD SANDLER, ECONOMIC CONCEPTS FOR THE SOCIAL SCIENCES 43–44 (2001).

151. *Id.* at 44.

152. *Id.* at 43–44.

There are no stable equilibria in this game, although both of the outcomes F-C (A fights, B cooperates) and C-F (A cooperates, B fights) are Nash equilibria.¹⁵³

If the game is *repeated*, as it is in academic units, one would expect that neither Nash equilibrium persists for very long; A and B may take turns fighting, but periodic forays of aggression by either A or B are punished by retaliation by fighting back, with the result that the parties should be pulled back into the C-C equilibrium.¹⁵⁴ For most academic units, all four states exist at different points in time, albeit to widely varying degrees.

The puzzle is why academic units seem caught in the unfortunate and unproductive F-F (both fight) state for long periods of time. Over time, it could be that a faculty member or faction could be “punished” in some modest way short of dismissal, such as smaller pay raises, undesirable teaching schedules, or unpleasant administrative duties. Such punishment could be enough to induce cooperation and draw faculties into the C-C outcome. This game is static to illustrate relationships between faculty members. The reality is dynamic, involving different states at different times.¹⁵⁵

But then why does faculty fighting persist?¹⁵⁶ For one thing, because of tenure, the modest punishments available for antisocial behavior may be too low to deter such behavior. Much antisocial behavior can be couched in terms of long-term institutional interest, and it is far from straightforward to distinguish self-serving arguments from genuine institutional concern.¹⁵⁷ With a high bar for adequate cause,¹⁵⁸ faculty can engage in all but the most offensive behavior in faculty conflict. There is thus little, at least in the form of formal sanctions, to deter faculty members from fighting.

In addition, faculty members have at their disposal one other unproductive response to conflict, also discussed above, and also enabled by the tenure system: shirking.¹⁵⁹ Of course, there are also differences of opinion on what constitutes shirking, but again, just about every professor would acknowledge that this exists broadly in just about every unit.¹⁶⁰ In this model, shirking could be the offloading of administrative work, or lower productivity in terms of teaching or scholarship.

153. A Nash equilibrium is an outcome in which one player's strategy is optimal given the other player's action. Gibbons, *supra* note 1, at 8–12.

154. Axelrod & Hamilton, *supra* note 1, at 1393.

155. *Id.* at 1392.

156. *See, e.g.*, Hearn & Anderson, *supra* note 143, at 505.

157. *Id.*

158. *See* McKenzie, *supra* note 81, at 325.

159. *Id.* at 327.

160. *See, e.g.*, Prosser, *supra* note 117, at 259.

In this model, I conflate fighting and shirking. That is to say, shirking yields the same payoffs as fighting, both for the fighter/shirker, and the other player. It is true that shirking and fighting inconvenience colleagues in different ways. I posit that they are roughly comparable in terms of the degree of harm. A fighting colleague certainly makes life unpleasant. But so does shirking, as it sows resentment, requiring others to pick up the slack institutionally.¹⁶¹ As for the fighter/shirker, it is rarely pleasant to be engaged in faculty conflict. Nor is it pleasant, even if one could do so without formal sanction, to have disengaged from the workplace, for many the most reliable and steady source of social interactions.¹⁶²

B. The Possibility of Exit

This simple Hawk-Dove model omits an important third option for some faculty members: the possibility of *exit*. Exit can be a lateral move to another institution, to another job, or into retirement. In the absence of fighting or shirking, exit is costly, as moving to another institution and another city is time-consuming and stressful. But if there is fighting or shirking, exit provides an alternative to fighting and being mired in the F-F outcome. In Fig. 2 below, exit is modeled as a superior outcome for B, the exiting faculty member, if her colleagues are fighters. Moving is costly and time-consuming, so even if B is heading for a more cooperative faculty, it would not be quite as good as staying put in a cooperative faculty. But it would be better than staying put in an *uncooperative* faculty.

Colleagues left behind are worse off, even after the loss of their nemesis. They must now take the time to replace their colleague, and there is no guarantee that the replacement will be any better, either in terms of productivity or agreeability. After all, at some point the departed colleague either chose or was chosen in an appointments process in which faculty get to choose their colleagues. For colleagues left behind, I assume that their payoff is the same as fighting.

161. See, e.g., Swygert & Gozansky, *supra* note 101, at 381.

162. "Social capital" is the term given to strong, mutually beneficial relationships with people. Workplace social capital is the term used to describe the strength and extent of social relations at the workplace. Low workplace social capital has been associated with poorer physical and mental health. See, e.g., Anne Kouvonen et al., *Low Workplace Social Capital as a Predictor of Depression: The Finnish Public Sector Study*, 167 AM. J. EPIDEMIOLOGY 1143, 1148 (2008); Etsuji Suzuki et al., *Does Low Workplace Social Capital Have Detrimental Effect on Workers' Health?*, 70 SOC. SCI. & MED. 1367, 1369 (2010).

Fig. 2

		B		
		F	C	E
A	F	3 3	8 4	3 <u>5</u>
	C	<u>4 8</u>	7 7	3 5

This possibility of B's exit destabilizes the Nash equilibrium F-C (A fights and B cooperates). If B can exit, A's dominant strategy is to cooperate. Knowing that, B's dominant strategy is thus to fight. A stable Nash equilibrium is thus C-F (A cooperates, B fights). This represents the existence of some leeway (within limits, of course) that are granted to those who have the possibility of exit.

What if A also has a possibility of exit? The game must then be modified further to account for that option available to A. This is shown in Fig. 3 below.

Fig. 3

		B		
		F	C	E
A	F	3 3	8 4	3 <u>5</u>
	C	4 8	<u>7 7</u>	3 5
	E	<u>5 3</u>	5 3	

What the symmetrical exit option does is make cooperation the dominant strategy for those not exiting. If both players have the exit option, then cooperation becomes the dominant strategy for both. C-C becomes a stable equilibrium. However, C-C is only a stable equilibrium if there is the realistic possibility of exit. Apart from retirement, exit is only possible for faculty members who are productive.

What the possibility of symmetrical exit introduces is a *disciplining effect* on a faculty that might otherwise be inclined to conflict or shirking. Even shirkers might be induced to shirk less, because if too many of their colleagues depart, their institution will eventually shrink, and ultimately, they might be called upon to do some work!

It is also important to notice another implication of this model: that exit, if possible, need not be exercised in order to act as a disciplining force. As noted above, it is the *threat* of exit that keeps would-be bickering faculty in line; if that threat is carried out, then the deterrent effect is lost. In this model, exit is possible but not inevitable.

C. Summarization of Assumptions

To summarize, this model makes and depends upon the following assumptions:

Assumption 1: Fighting when the other is cooperating (i.e., not fighting) produces a slightly higher individual payoff for the fighter, but the group payoff is lower. While fighting produces some individual satisfaction, the effort to obtain it is costly. Fighting is commonly observed in academic units, so there must be some individual utility involved. For the non-fighting cooperator, the outcome is clearly worse as compared to a cooperative C-C outcome. Without her consent, some change has occurred in the academic unit that conflicts with her academic life or academic vision. In that same vein, the lack of cooperation suppresses productivity and collegiality. Academic fighting is assumed to be a *negative* sum game. This is also true if instead of fighting, shirking occurs. Group outputs are lower, because non-shirkers are left to carry more of the administrative load, displacing productivity and reducing collegiality.

Assumption 2: For the short term, cooperating as a response to fighting produces a higher individual payoff than that of fighting back. Fighting back (or shirking back) may, over the long term, discipline fighting or shirking, but not in the short term. While voting rules and governance procedures in faculties vary widely, academic units depend on comity for cohesiveness and for the generation of the knowledge spillovers so crucial to the productiveness of an academic unit. Mutual fighting is thus assumed to be an unproductive stalemate. Cooperation (or rather, in the face of fighting, capitulation) is thus preferable, because at least it saves on the time and effort spent fighting.

Assumption 3: Exit as a response to fighting, for those who are able and inclined to exit, produces an individual payoff that is better than either fighting back or cooperating. Not everyone can exit, but for those who can, exit holds out the prospect of moving laterally to an academic unit that has less fighting or shirking, or has more resources and benefits. While moving is costly, the payoff of a prospective stream of cooperative outcomes over time may outweigh the transition costs.

Assumption 4: Exit is a poor outcome for those left behind. Replacing a lost colleague is always costly. There is always the possibility that a lost colleague can be replaced by someone better, but there is a great deal of uncertainty in the hiring process.

D. Summarization of Hypotheses

This game-theoretic model, as all games do, only illustrates why certain states might exist relative to others. Whether they do or not is clearly more complicated than the stylized payoffs of a game could explain. The thesis of this article is to explain why some law faculties exist in some states and not others. I advance two hypotheses.

Hypothesis 1: Up to a point, the greater the threat of exit, the greater the likelihood for cooperation. If there is too great a probability of exit, then cooperation suffers, as the original Prisoner's Dilemma game illustrates. But up to a point, the *threat* of exit keeps faculty members cooperative.

Hypothesis 2: Higher local quality of life will lead to lower cooperation. Using indices generated by the Gallup polling organization and by the Centers for Disease Control (and modified by economic researchers), I hypothesize that the higher the quality of life index, the lower the level of cooperation.

V. DATA AND RESULTS

A. Data

U.S. law schools are extremely sensitive to external indices, most notably the rankings published annually by U.S. News & World Report (USNW).¹⁶³ It is no exaggeration, and a constant lament on the part of American law professors, that USNW rankings are the single greatest determinant for a large variety of important outcomes, such as job placements, starting salaries for graduates, and faculty productivity.¹⁶⁴ That is the reality of life in American law schools.

But within this very hierarchical ecosystem, variation exists. Among similarly situated law schools, some faculties are more cooperative than others, some more productive than others, and some experience greater faculty turnover than others. This article seeks to tie together these and other factors in this empirical study on faculty collegiality and cooperation. While these two

163. *Best Law Schools*, U.S. NEWS & WORLD REP., <https://www.usnews.com/best-graduate-schools/top-law-schools/law-rankings>.

164. See, e.g., Jeffrey Evans Stake, *The Interplay Between Law School Rankings, Reputations, and Resource Allocation: Ways Rankings Misperceive*, 81 IND. L.J. 229 (2006).

dependent variables are not one and the same, they both measure to some extent the intellectual health of a faculty.

It is true, of course, that the *raison d'être* of every law school, even Yale, is legal instruction. But since it is extremely difficult to measure quality of instruction, and since there is no evidence that quality of instruction affects tangible outcomes such as placement success or graduate starting salary levels, it seems futile to try and measure it. The analysis does, however, take account of the highly variable need of law schools for attentiveness to teaching, so that law schools that emphasize teaching are not coded as “unproductive” or “uncollegial,” just because they respond rationally to the tyranny of USNW rankings. This article seeks to address this question: Given the external demands placed on law schools, what are some of the causal mechanisms of faculty cooperativeness?

This article challenges the notion that faculty turnover, by itself, is a sign of ill health. In fact, up to a certain point, beyond which turnover is excessive and demoralizing, more turnover begets more cooperation. To the extent that tenure depresses faculty turnover, it may contribute to unproductive or uncooperative behavior.

1. Survey of Law Professors

I administered a survey via email of law professors in U.S. law schools in May and June of 2014. Email addresses were obtained from the directory of law professors published by the Association of American Law Schools. The survey asked respondents to self-report a number of things, most importantly faculty collegiality. Faculty respondents were asked to rate their faculty, on a scale of 1 to 10, with 1 being the worst and 10 being the best, on their faculty's collegiality. They were also asked to estimate the amount of time, in an *average* week, smoothing out over the course of the year,¹⁶⁵ they spent on: (i) teaching, (ii) scholarship, and (iii) administrative matters. The survey instrument also asked respondents for a number of personal factors: age, years in the legal academy, relationship status, number of children, and their own subjective evaluation of their extra-academic quality of life. Lastly, respondents were asked to identify their law school.

The survey generated 750 responses, about 35% of those opening the email containing the survey solicitation. Those actually receiving and opening the email constituted about 20% of all active legal personnel listed in the AALS faculty directories. Not all of these entries, however, represent tenure-tracked

165. Respondents were asked to smooth out their workload over the course of a year, to account for the natural academic fluctuations over a calendar year: more teaching during the academic year, more scholarship over the summer.

professors or instructors, and the 750 responses yielded roughly 555 usable responses. Additional surveys missing responses to key questions were also unusable for some regressions. For this article, only tenure-track professors, Deans, and tenure-track Vice Deans and Associate Deans were included.

2. Cooperation

One measure of cooperation used in this study is thus the collegiality self-reported by professors in the survey instrument from 1 to 10. It is true that collegiality is not the same thing as cooperativeness. However, collegiality is an important precursor to cooperation.¹⁶⁶ Faculty colleagues must be collegial enough to interact and extend social graces to each other in order to cooperate and take on the more challenging tasks of testing each other's ideas.

I also measured research cooperation by counting the number of co-authored articles, published in secondary sources—U.S. law journals—included in the Hein Online database, from 2005 to 2013, inclusive, by two or more professors from the same law school. The goal of cooperation leading to collaboration is to produce co-authored articles. That ideal outcome is not always attained, but is an objective indicator of the extent of collaboration within a law faculty. I utilize a measure that accounts for variations in faculty size: the *rate* of co-authorship, the number of co-authored articles divided by the average number of faculty members.

3. Faculty Turnover

Faculty turnover was measured by consulting the AALS faculty directories and manually counting, year by year and law school by law school, the number of new entrants and exits (including retirements) in each year for every law school, from 2005 to 2013.¹⁶⁷

There are two different ways of operationalizing faculty turnover: the number of changes in faculty composition, which would include both newly hired professors as well as losses to retirement and lateral moves; or just the number of losses. The former might measure the level of disruption accompanying either new hires or losses. The latter view might consider new hires a happy occasion, so that only the disutilities of losing a colleague are worth worrying about. Along a second dimension, in considering the

166. David N. Laband & Robert D. Tollison, *Intellectual Collaboration*, 108 J. POLIT. ECON. 632 (2000); João R. Faria et al., *Human Capital, Collegiality, and Stardom in Economics: Empirical Analysis*, 106 SCIENTOMETRICS 917 (2016); Sandra Jones et al., *Distributed Leadership: A Collaborative Framework for Academics, Executives and Professionals in Higher Education*, 34 J. HIGHER EDUC. POL'Y & MGMT. 67 (2012); Mary Frank Fox, *Publication Productivity Among Scientists*, 13 SOC. STUD. SCI. 285 (1983).

167. One year, 2009, was missing, during which the AALS failed to publish a directory.

magnitude of the change, turnover might be either the absolute number of changes or losses (depending on which is used), or the number of changes or losses as a fraction of the total faculty. The former might measure the absolute amount of work needed to adjust, while the latter might measure the work of adjustment spread out over the entire faculty. Four different measures were thus tested for turnover over the eight-year study period:

- (i) the total number of faculty losses, or “losses,”
- (ii) the total number of faculty losses *plus* new hires, or “gains+losses,”
- (iii) the faculty losses as a fraction of the faculty size,¹⁶⁸ or “loss rate,” and
- (iv) the total losses plus new-hires as a percentage of the average total faculty members, or “gain+loss rate.”

4. Resources

In the hierarchical world of U.S. law schools, rankings determine the amount of resources devoted to all manner of faculty work. Lower-ranked law schools have higher teaching loads, and fewer resources to support scholarship, such as travel budgets, library support, and supplemental instruction.¹⁶⁹ The hypotheses in this research posit that within the rankings, there is variation among similarly situated law schools, and that this variation can be partially explained by the factors explored in this article—faculty turnover and local quality of life. But given the disparities between have and have-not law schools, it is necessary, when considering collegiality to control for status in the rankings, as a proxy for its resources. Different measures used by USNW Report are employed to control for this source of disparities. USNW overall scores, peer scores, lawyer-and-judge scores, and academic ranking are tested for significance, as well as a supplemental ranking system was developed by University of Chicago Professor Brian Leiter and University of St. Thomas Professor Gregory Sisk (hereinafter the Leiter–Sisk index).¹⁷⁰

168. Faculty size was averaged over the eight-year period.

169. For 2017, the top quartile of law schools with valid data on per-student expenditures averaged \$59,272 per student; the bottom quartile averaged \$29,175. Harvard, Yale, Stanford and Columbia averaged \$104,938 per student.

170. The Leiter–Sisk index provides a ranking and citation count for the top ninety-seven law schools. I filled in the bottom-ranked half of law schools with a value slightly more than half of the lowest-scored law school. I developed this by graphing the Leiter–Sisk scores from top to bottom, and estimating the best fitting straight line extending out beyond the end of lowest scored law schools, and taking the average values along that fitted line. While the lowest reported law school in the Leiter–Sisk index had 177 citations in the relevant period, I estimated the average citation count for the bottom half, unreported law schools, would be ninety-nine.

Direct measures are available as well, albeit through the highly filtered law school-reported expenditures that are part of the USNW rankings pretense. USNW reports expenditures per student for instruction, library, and support, and also their expenditures per student for financial aid.¹⁷¹ USNW also ranks law schools by faculty resources, but does not provide a dollar figure, as it does for student resources (instruction, library, support, financial aid).¹⁷² Individual respondents to the law professor survey were also asked to rate their law school's support of teaching, scholarship, and service, respectively.

5. Local Quality of Life

The second hypothesis of this article is that local quality of life places a competing claim on faculty members' time, and detracts from cooperation. I collected location-specific indices of local quality of life for the locations of all U.S. law schools. One source of data was derived from surveys conducted by The Centers for Disease Control (CDC), under its Behavioral Risk Factors Surveillance System (BRFSS).¹⁷³ BRFSS surveys ask respondents a large number of health and well-being questions, including the question: In general, How satisfied are you with your life?¹⁷⁴ The question is meant to measure the respondent's subjective well-being, so some vagueness is intentional and purposeful.¹⁷⁵ This data is also modified in a study by economists Edward Glaeser, Joshua Gottlieb, and Oren Ziv,¹⁷⁶ which grouped respondents by metropolitan statistical area, and also adjusted raw happiness scores by demographics and by demographics and income. Those three measures—raw BRFSS happiness scores, BRFSS scores adjusted for demographics, and BRFSS scores adjusted for demographics and income—were then assigned to each law school based on their location. Some law schools are not located in any metropolitan statistical area. The Glaeser et al. study also separated out and estimated happiness for respondents living in a *non*-metropolitan area.¹⁷⁷ That applied, for example, to Grundy, Virginia (the home for the Appalachian

171. Robert Morse & Kenneth Hines, *Methodology: 2019 Best Law Schools Rankings*, U.S. NEWS & WORLD REP. (Mar. 19, 2018, 9:30 PM), <https://www.usnews.com/education/best-graduate-schools/articles/law-schools-methodology>.

172. *Id.*

173. Edward L. Glaeser et al., *Unhappy Cities 5* (Nat'l Bureau of Econ. Research, Working Paper 20291, 2014).

174. *Id.* at 5.

175. *Id.* at 6.

176. See generally Glaeser et al., *supra* note 173. I am grateful to the authors, who shared their compilation of their raw data in statistical metropolitan areas, along with their adjustments to the raw data.

177. *Id.* at 15.

School of Law), Urbana-Champaign, Illinois (the home of the University of Illinois College of Law), and Moscow, Idaho (the University of Idaho College of Law).

A second source of data for location-specific, local quality of life was derived from a long-running Gallup poll asking respondents to evaluate their city or town.¹⁷⁸ Since the Gallup poll has been conducted for decades, their results do not map perfectly onto current Census metropolitan statistical areas, and there is no category of non-metropolitan places in each state, as there was in Glaeser et al. For law schools not in one of these Gallup-defined metropolitan statistical areas, I selected the nearest Gallup-defined metropolitan area, usually within-state, as a measure for quality of life in the law school location. For example, Valparaiso Law School, in Valparaiso, Indiana was coded as South Bend, the same location as Notre Dame, one hour away. Of course, there is bound to be some imprecision in this exercise.

To summarize, five different measures were tested for the location-specific measures of the quality of life, denoted as *D*:

- (i) the raw BRFSS happiness scores for metropolitan statistical areas, or “*CDC happiness*”;
- (ii) those BRFSS raw happiness scores adjusted for demographic characteristics, by Glaeser et al., or “*CDC happiness+dem*”;
- (iii) those BRFSS raw happiness scores adjusted for both demographic characteristics and income, also by Glaeser et al., or “*CDC happiness+dem+inc*”;
- (iv) Gallup scores in the 2013 Gallup poll of satisfaction with the City¹⁷⁹ or “*Gallup satisfaction*”; and
- (v) Gallup scores in the 2011 Gallup poll of city well-being,¹⁸⁰ a weighted index that combines self-reported perceptions of well-being and several health metrics, such as location-specific incidences of obesity and exercise frequency, or “*Gallup health*.”

178. Rebecca Riffkin, *City Satisfaction Highest in Fort Collins-Loveland, Colo.*, GALLUP (Apr. 11, 2014), <http://www.gallup.com/poll/168485/city-satisfaction-highest-fort-collins-loveland-colo.aspx> [<https://perma.cc/57QN-FM8U>] (showing responses to question: Are you satisfied with the city or area in which you live?).

179. *Id.*

180. Dan Witters, *U.S. University Towns Score High on Well-being*, GALLUP (Mar. 5, 2012), <https://news.gallup.com/poll/153095/University-Towns-Score-High-Wellbeing.aspx> [<https://perma.cc/M8UC-NCRH>].

B. Results

Tables 1a, 1b, 2a and 2b report results of regressions using the two different dependent variables for cooperation—*self-reported collegiality* and *co-authorship rate*—and the two different independent variables, faculty turnover and local quality of life. Tables 1a and 1b, using the individual respondent as the unit of observation, use *self-reported collegiality* as the dependent variable. Table 1a shows the results of models using different measures of faculty turnover, and Table 1b shows the results of models using different measures of local quality of life. Because self-reported collegiality is an ordinal variable from 1 to 10, the regressions in tables 1a and 1b are ordered probit.¹⁸¹

Similarly, tables 2a and 2b, using the law school as the unit of observation, set forth the results of regressions of *co-authorship rate* against, respectively, different measures of a) faculty turnover, and b) local quality of life indicators. Because a number of law schools had zero internal co-authorships over the eight-year study period, the dependent variable is left-censored,¹⁸² so the regressions shown in tables 2a and 2b are tobit.¹⁸³

The purpose of the regressions reported in table 1a is to determine which measure of faculty turnover is the most statistically significant. The most statistically significant measure of faculty turnover is then incorporated in the models in table 1b. The purpose of the regressions reported in table 1b is to determine which measure of local quality of life is the most statistically significant. So, in turn, the most statistically significant measure of local quality of life is incorporated into the models in table 1a.

As noted above, law schools are very heterogeneous in terms of resources, and thus potentially biased in terms of how faculty members might cooperate or collaborate.¹⁸⁴ Also discussed above, a plethora of measures could act as a control variable.¹⁸⁵ Of all of these, the USNW Report overall score, averaged over the years 2009–2014, turned out to be the most consistently statistically

181. Ordered probit models are models estimating the relationship between continuous independent variables and dependent variables that are “discrete,” meaning they can only take on one of several ordered, ranked values. This is typical for survey data, in which respondents are asked to express the strength of their preferences on a scale. *See, e.g.*, RUSSELL DAVIDSON & JAMES MACKINNON, ESTIMATION AND INFERENCE IN ECONOMETRICS 529–31 (1993).

182. “Censored” data is data that cannot take on certain values, like a dependent variable that must be greater than zero, which may mask over that omitted range a statistical relationship with an independent variable. *See, e.g.*, GEORGE P. JUDGE ET AL., INTRODUCTION TO THE THEORY AND PRACTICE OF ECONOMETRICS 796–97 (2d ed. 1988).

183. Tobit models are those which estimate relationships between continuous independent variables and continuous but censored dependent variables. *Id.* at 795–97.

184. *See supra* section V.A.4.

185. *See supra* note 177 and accompanying text.

significant measure to control for ranking effects. Also, as it turns out, self-reported measures of how much a law school supports scholarship is a very strong determinant of self-reported collegiality.¹⁸⁶

As noted above, the hypothesis is that *up to a certain point*, higher turnover produces higher cooperativeness. In some law schools, turnover is so high that it is demoralizing to the faculty left behind.¹⁸⁷ Replacing departed faculty is time-consuming, so the constant loss of colleagues places real time constraints on cooperation in teaching or scholarship. That is the more familiar story of faculty turnover: that it is either a signal of internal strife or that it is a pure loss to those remaining. It is quite possible that at very high levels of turnover, self-reported collegiality could suffer.

What is that certain point? It is hard to know, without any a priori notions of how much turnover is too much. To determine an appropriate threshold, I performed iterative regressions with a view towards finding the optimal value of the *pseudo-R*².¹⁸⁸ I regressed co-authorship and separately, self-reported collegiality, and iteratively dropped law schools with high turnover rates, gradually reducing the threshold above which law schools, and faculty respondents from the law schools, are dropped from the data set. Going through this process, I arrived at a threshold level of about 42% for both sets of regressions. For both sets of regressions, the predictive power of the model drops off if one includes law schools with turnover rates higher than this rate. For the self-reported collegiality model this results in the discard of thirty-five observations from twenty law schools. Thus, from the co-authorship model, this resulted in the discard of twenty law schools. That turnover rate translates into the loss of almost half of faculty over the eight-year study period.

All models included a dummy variable for married faculty members. Married faculty tend to be more productive than unmarried faculty members,¹⁸⁹ though female faculty members with children tend to assume more responsibility for child-raising, and hence enjoy less of a productivity bump over unmarried female faculty.¹⁹⁰ All models in tables 1a and 1b also include co-authorship rates for the respondent's law school. In theory, self-reported collegiality should correlate with co-authorship.

186. See *infra* tbl.1a.

187. See *supra* section IV.A.

188. JUDGE, *supra* note 182, at 794.

189. Barry Bozeman & Monica Gaughan, *Job Satisfaction Among University Faculty: Individual, Work, and Institutional Determinants*, 82 J. HIGHER EDUC. 154, 159 (2011).

190. Mary Frank Fox, *Gender, Family Characteristics, and Publication Productivity Among Scientists*, 35 SOC. STUD. SCI. 131, 136 (2005); Linda J. Sax et al., *Faculty Research Productivity: Exploring the Role of Gender and Family-Related Factors*, 43 RES. HIGHER EDUC. 423, 431 tbl.3 (2002).

To summarize, the variables included in these models are:

- Respondents' rating of law school support for scholarship: *scholarship support*;
- USNW overall score averaged from 2009 to 2014: *USNW 2009–2014 overall*;¹⁹¹
- Number of articles co-authored by professors within the same law school, from 2005–2013, divided by the average faculty size: *co-authorship rate*;¹⁹²
- Respondents' rating of faculty collegiality: *self-reported collegiality*;¹⁹³
- Respondents' marital status: *married*;
- Number of faculty losses from 2005–2013: *losses*;
- Number of faculty additions plus losses from 2005–2013: *gains+losses*;
- Number of faculty losses divided by average faculty size from 2005–2013: *loss rate*;
- Number of faculty additions plus losses divided by average faculty size from 2005–2013: *gain+loss rate*;
- Raw happiness scores from the CDC BRFSS survey, for metropolitan statistical areas, or "*CDC happiness*";
- Raw CDC BRFSS happiness scores adjusted for demographic characteristics, by Glaeser et al., or "*CDC happiness+dem*";
- Raw CDC BRFSS happiness scores adjusted for both demographic characteristics and income, by Glaeser et al., or "*CDC happiness+dem+inc*";
- 2013 Gallup poll scores of city satisfaction, or "*Gallup satisfaction*"; and
- 2013 Gallup poll scores of city well-being, an index that combines several self-reported perceptions of well-being and health, or "*Gallup health*."

191. When employed as an independent variable in table 1a in which the unit of observation is the respondent, it is the USNW average overall score for 2009–2014 for the respondent's law school.

192. When employed as an independent variable in table 1a in which the unit of observation is the respondent, it is the co-authorship rate of the respondent's law school.

193. When employed as an independent variable in table 1b in which the unit of observation is the individual law school, it is the *average* of self-reported collegiality ratings of respondents from the law school.

1. Self-reported Collegiality

Tables 1a and 1b show different models for respondents' self-reported collegiality. As acknowledged above, collegiality is not the same thing as cooperation. However, obtaining self-reported data is almost certainly a better temperature-taking of a faculty than most other indices that could be constructed.

Table 1a
Self-reported collegiality – faculty turnover measures

Variables	(1)	(2)	(3)	(4)	(5)	(6)
scholarship support	0.316*** (13.19)	0.318*** (13.26)	0.316*** (13.18)	0.318*** (13.27)	0.321*** (13.41)	0.321*** (13.42)
USNW 2009–2014 overall	-0.011*** (-3.63)	-0.012*** (-3.73)	-0.013*** (-3.69)	-0.014*** (-4.02)	-0.014*** (-4.02)	-0.014*** (-4.46)
co-authorship rate	0.678 (1.56)	0.667 (1.54)	0.675 (1.56)	0.669 (1.54)	0.614 (1.42)	0.612 (1.42)
married	0.195* (1.74)	0.198* (1.77)	0.199* (1.77)	0.203* (1.81)	0.195 (1.75)	0.199* (1.78)
losses				0.020* (1.85)		0.025** (2.29)
gains+losses			0.007 (1.13)			
loss rate		0.865 (1.47)			1.238** (2.17)	
gain+loss rate	0.023 (0.72)					
Gallup satisfaction	-0.029** (-2.14)	-0.026** (-2.00)	-0.029** (-2.17)	-0.027** (-2.10)		
CDC happiness					-1.172 (-1.60)	-1.110 (-1.52)
Observations	500	500	500	500	500	500
Pseudo R ²	0.0885	0.0892	0.0888	0.0898	0.0888	0.0898

z values in parentheses

*** p < 0.01

** p < 0.05

* p < 0.1

The local quality of life measure used for models 1 through 4 was the Gallup index for city satisfaction, or *Gallup satisfaction*. Only one of the measures for faculty turnover is statistically significant, and only at the 90% level. However, it is worth noting that the overall fit of these models was poorer than that of models 5 and 6, which use a different measure for local quality of life, *CDC happiness*.

For either set of specifications, the most statistically significant measure of turnover was the pure number of faculty losses suffered over the eight-year period, *losses*. One might have hypothesized that the turnover should be adjusted for faculty size, or *loss rate*, the number of faculty losses divided by the faculty size.¹⁹⁴ But as in other model specifications not reported here, this was not the case, suggesting that it is not necessarily more meaningful for a small faculty to lose a colleague than a large one.

Respondents' self-reported law school support for scholarship (*scholarship support*) is clearly the most statistically significant and robust variable. That was true in almost all of the model specifications I tested. That it should boost collegiality is not surprising. The greater availability of resources should make it easier for faculty to cooperate.

The U.S. News & World ranking, averaged from 2009 to 2014 (*USNW 2009–2014 overall*), the most statistically significant of several similar indices, was also consistently statistically significant, but in the opposite direction that I expected. As one climbs the U.S. News & World rankings ladder, respondents reported *less* collegiality. That is surprising because insofar as rankings are a proxy for resource abundance, it is surprising that more is less. Why this should be the case is open for interpretation, but it could be that the higher-ranked the law school, the more demanding faculty members are for greater job satisfaction, and more disappointed they are. Studies of job satisfaction suggest that higher educated persons actually have *lower* job satisfactions.¹⁹⁵ If that somehow maps onto law professors, then this outcome might be less surprising.

Marital status (*married*) was statistically significant in almost all model specifications. Why would married faculty report higher collegiality than unmarried faculty, and even those that reported being in a relationship or a civil union?¹⁹⁶ A fair amount of psychological research now strongly suggests that statistically speaking, married persons are more likely to report higher levels of

194. The measure was the average of the faculty size over the eight-year period.

195. Bender & Heywood, *supra* note 130, at 253.

196. In response to the survey question on marital status, respondents could respond that they were: (1) married; (2) single, (3) in a relationship, or (4) other, including a legally recognized civil union.

happiness¹⁹⁷ and other measures of subjective well-being.¹⁹⁸ Married faculty generally report higher job satisfaction,¹⁹⁹ so it seems likely that they would report higher collegiality.²⁰⁰

Finally, table 1a provides some evidence for both of the hypotheses, *but not at the same time*. The statistical effects are quite small, and much smaller than the robustly significant *scholarship support* and *USNW 2009–2014*, suggesting that the effects of turnover are small compared to other factors, but significant.

Table 1b replicates most of the findings from table 1a, including those pertaining to the two hypotheses advanced in this article: that a statistically significant relationship exists between self-reported collegiality and *either* faculty turnover or location-specific indicators, but not both at the same time. Either *Gallup satisfaction* is statistically significant, or *losses* are statistically significant, but not both. It is also worth noting that models with a different measure of local quality of life, *CDC happiness*, provided an overall slightly better fit.

In both sets of models, *co-authorship rate* was not statistically significant. It would not appear that co-authorship itself necessarily led to higher feelings of collegiality.

197. See, e.g., Walter R. Gove et al., *Does Marriage Have Positive Effects on the Psychological Well-Being of the Individual?*, 24 J. HEALTH & SOC. BEHAV. 122, 126 (1983); Anke C. Zimmermann & Richard A. Easterlin, *Happily Ever After? Cohabitation, Marriage, Divorce, and Happiness in Germany*, 32 POP. & DEV. REV. 511, 511 (2006) (“There is a comfortable consensus in the social sciences that marriage has a positive and enduring effect on well-being . . .”).

198. “Subjective well-being” is a term that has been developed in the social sciences, most notably in Psychology, to describe a wider panoply of feelings associated with happiness, or what people are observed to prefer. For a discussion, see Ed Diener, *The Remarkable Changes in the Science of Subjective Well-Being*, 8 PERSP. PSYCHOL. SCI. 663 (2013).

199. Bozeman & Gaughan, *supra* note 189, at 159–60.

200. The causality could run in the other direction: just as it is possible that happier people are more likely to be married, it is possible that the respondents reporting higher levels of collegiality might be more likely to be married. See, e.g., Alois Stutzer & Bruno S. Frey, *Does Marriage Make People Happy, or Do Happy People Get Married?*, 35 J. SOCIO-ECONOMICS 326, 342 (2006).

Table 1b
Self-reported collegiality – location-specific quality of life measures

Variables	(1)	(2)	(3)	(4)	(5)
scholarship support	0.321*** (13.42)	0.321*** (13.45)	0.321*** (13.44)	0.318*** (13.27)	0.318*** (13.27)
USNW 2009–2014 overall	0.0150*** (-4.46)	0.0115*** (-4.50)	0.0152*** (-4.54)	-0.0138*** (-4.02)	0.0140*** (-4.13)
co-authorship rate	0.612 (1.42)	0.628 (1.45)	0.635 (1.47)	0.668 (1.54)	0.710 (1.63)
married	0.199* (1.78)	0.193* (1.73)	0.192* (1.72)	0.203* (1.77)	0.206* (1.84)
losses	0.025** (2.29)	0.026** (2.33)	0.025** (2.33)	0.020* (1.85)	0.025** (2.34)
CDC happiness	-1.110 (-1.52)				
CDC happiness +dem		-0.674 (-0.89)			
CDC happiness +dem+inc			-1.108 (-1.03)		
Gallup satisfaction				-0.0275** (-2.10)	
Gallup health					-0.044* (-1.81)
Observations	500	500	500	500	500
Pseudo R^2	0.0898	0.0881	0.0883	0.0887	0.0897

z values in parentheses

*** $p < 0.01$

** $p < 0.05$

* $p < 0.1$

2. Co-authorship Rate

Self-reported collegiality is one measure of propensity to cooperate. A more objective indicator might measure actual cooperation: articles co-authored with colleagues in the same faculty, divided by the number of faculty averaged over 2005–2013, *co-authorship rate*, is used as a dependent variable.

Note that in tables 1a and 1b, the unit of observation was the individual respondent, and externally collected law school data was imputed to each respondent (who reported his or her law school). In tables 2a and 2b, the process is reversed: the unit of observation is the law school, and survey data about the law school from respondents is imputed to each law school. So for example, self-reported collegiality for a law school is taken by an average of all of the respondents from that law school. Law schools with no individual respondents at all (32) were dropped. As noted above,²⁰¹ many law schools had no co-authorships over the study period, effectively left-censoring the data, so the regressions in tables 2a and 2b are tobit.

201. See *supra* note 182 and accompanying text.

Table 2a
Co-authorship rate – faculty turnover measures

Variables	(1)	(2)	(3)	(4)
constant	0.075 (0.30)	0.069 (0.29)	0.114 (0.46)	0.957 (0.39)
self-reported collegiality	0.0169*** (2.87)	0.0175*** (3.00)	0.0175*** (2.93)	0.0180*** (3.05)
USNW 2009–2014 overall	0.0040*** (7.64)	0.0040*** (7.60)	0.0036*** (5.81)	0.0035*** (5.74)
losses				0.0056** (2.44)
gains+losses			0.0023* (1.69)	
loss rate		0.2601** (2.68)		
gain+loss rate	0.1180** (2.08)			
Gallup satisfaction	-0.0034 (-1.24)	-0.0034 (-1.25)	-0.0036 (-1.28)	-0.0034 (-1.24)
Observations	164	164	164	164
Pseudo R^2	-1.466	-1.523	-1.437	-1.499

t values in parentheses

*** $p < 0.01$

** $p < 0.05$

* $p < 0.1$

Table 2b
Co-authorship rate – location-specific quality of life measures

Variables	(1)	(2)	(3)	(4)	(5)
constant	-0.231*** (-5.09)	-0.232*** (-5.10)	-0.235*** (-5.13)	0.069 (0.29)	-0.561 (-1.55)
self-reported collegiality	0.0188*** (3.30)	0.0192*** (3.39)	0.0192*** (3.39)	0.0175*** (3.00)	0.0206*** (3.51)
USNW 2009– 2014 overall	0.0039*** (7.54)	0.0039*** (7.52)	0.0039*** (7.50)	0.0040*** (7.60)	0.0038*** (7.10)
loss rate	0.280*** (2.89)	0.279*** (2.87)	0.280*** (2.89)	0.260*** (2.68)	0.285*** (2.92)
CDC happiness	-0.175 (-1.12)				
CDC happiness+dem		-0.140 (-0.87)			
CDC happiness +dem+inc			-0.223 (-0.99)		
Gallup satisfaction				-0.0034 (-1.25)	
Gallup health					0.005 (0.92)
Observations	164	164	164	164	164
Pseudo R^2	-1.516	-1.506	-1.510	-1.523	-1.508

t values in parentheses

*** $p < 0.01$

** $p < 0.05$

* $p < 0.1$

This second set of results in tables 2a and 2b, using *co-authorship rate* as the dependent variable, produces slightly different conclusions from those suggested by tables 1a and 1b. First, *self-reported collegiality* did in fact result in more co-authorship. The more collegial the faculty, the more co-authorship. The converse was not necessarily true, as in tables 1a and 1b higher co-authorship rates did not cause respondents to self-report higher faculty collegiality.

Second, across all models, two measures for faculty turnover—*losses* and *loss rate*—were statistically significant. Whereas in tables 1a and 1b the *losses* were slightly more significant than *loss rate*, in tables 2a and 2b the reverse was true. As opposed to the results reported in tables 1a and 1b, the results in tables 2a and 2b indicate quite clearly and robustly that faculty turnover positively affects co-authorship rates. This might be surprising since one might expect longer relationships and lower turnover to yield more co-authorships. Evidently not.

Third, the higher *USNW 2009–2014 overall*, the higher the *co-authorship rate*. Taking as a very large caveat the limitations of USNW data, it nevertheless makes intuitive sense that the higher the USNW score, the higher the rates of co-authorship. In the intensely hierarchical law school world, higher scores mean greater resources, smaller teaching loads and, possibly on average, more ambitious scholars. Co-authorship should be expected. However, the higher the *USNW 2009–2014 overall*, the lower the *self-reported collegiality*. All other things being equal, self-reported collegiality *declines* as one moves up the USNW food chain. It may not be anomalous that faculty in higher-ranked schools collaborate more on co-authored articles but still report lower collegiality. A balkanized faculty with factions of ambitious scholars might very well produce those results.

Taken together, all of the results provide some evidence supporting hypothesis 1: that *up to a point*, higher faculty turnover leads to higher cooperation, but only a little evidence that local quality of life negatively affects cooperation. The results also provide some evidence, more modest, supporting hypothesis 2: that within some limits, a higher local quality of life may lead to lower collegiality (but not lower co-authorship rates).

It is interesting that collegiality seems only to be much more affected by *loss* instead of *gains+losses*. In order for a faculty to remain collegial after a loss of a faculty member, it would need to replace that member without too much difficulty; otherwise a loss would be pure loss, with administrative work to be spread among fewer faculty members, and no fresh new faces to replace the lost ones.

Further study, expanding on these preliminary results, is needed to understand how to distinguish these two types of measures of faculty turnover,

and how they affect faculty collegiality. In any case, it would be prudent to emphasize that other factors, probably too idiosyncratic to measure in this type of study, likely play a larger role in faculty collegiality. Certain cultures may be robust or not, and may exist in certain faculties or not, for reasons not studied here.

V. SIMULATING A MORE DYNAMIC FACULTY

Clearly, the scholarly and teaching productivity of a faculty is determined by many factors, but cooperation and collaboration are vital, even crucial parts of a faculty. A lack of cooperation gives rise to a body that is, at its improbable best, merely a sum of its parts; the organization has no purpose at all. Much more likely, a failure of cooperation gives rise to an organization that is less than the sum of its parts, as its constituent individuals spend valuable energy on unproductive behavior.

This article clearly suggests that one factor, not the most important one but a significant one, is the extent of faculty turnover in a faculty. There is future research to be done to understand exactly why some (but not too much) turnover leads to more cooperation, but the suggestion is that a credible threat of exit within a faculty may induce better behavior and more cooperation. It is tricky to simulate such a balance, as the game-theoretic model in this article suggests it is the threat of loss and its concomitant costs that keep faculty in line. There are several possibilities that can recreate some parts of this dynamic, and contribute to a greater level of cooperation in a law faculty. To the extent that these are viewed as eroding the security of tenure, they are unsurprisingly controversial among academics, and the literature might be expected to be scant.

A. *Post-tenure Review*

First, Michael Swygert and Nathaniel Gozansky have suggested that some level of post-tenure review might be appropriate, to reduce shirking.²⁰² Post-tenure reviews are fairly common in institutions of higher education generally,²⁰³ but not in law schools.²⁰⁴ Goals and processes differ widely among different institutions, some oriented towards accountability, and some towards

202. Swygert & Gozansky, *supra* note 116, at 357 (“[The] underproductiveness among senior law faculty members in American law schools is disturbingly widespread.”).

203. See, e.g., Christine M. Licata & Joseph C. Morreale, *Post-Tenure Review: National Trends, Questions and Concerns*, 24 INNOVATIVE HIGHER EDUC. 5, 6–7 (1999) (surveying studies of post-tenure processes, and citing figures of between 46% and 61%).

204. Swygert & Gozansky, *supra* note 116, at 357.

faculty development.²⁰⁵ Some are annual, others periodic, in the range of five to seven years.²⁰⁶

Trying to soften the effects of what could be an embarrassing or wrenching process, Swygert and Gozansky suggest that the orientation of such a review process should be towards helping colleagues, not necessarily judging them.²⁰⁷ If tenured faculty members are asked what they are doing and answer “nothing,” then they suggest the gentle rejoinder, “[w]hy? Can we help?”²⁰⁸ And even if a faculty member has no publications, a peer-driven, post-tenure review process should next delve into whether the faculty member is engaging in other professionally or institutionally worthwhile activities, presumably to be interpreted broadly.²⁰⁹

Such an approach, now three decades since Swygert and Gozansky suggested it, seems a bit Pollyannaish but constructive. Certainly, if tenured professors shirk, then silence about shirking seems to effectively license it, and possibly communicates to other faculty that such behavior is reconcilable with institutional goals, or that it is some form of delayed compensation for past years of service to the law school. Certainly, as faculty members age, the nature of their contribution to the institution and the academy change,²¹⁰ and recognition of the value of a diverse variety of contributions would seem wise. But it would be incongruous to not expect any contributions at all. To the extent a peer-driven, post-tenure review at least opens up a conversation about contributions to the institution, it cannot be a step in the wrong direction. Moreover, such a conversation, properly oriented, may lead to forms of collaboration. If a mandate to assist hobbled colleagues is truly part of the process, then it is likely that some collaboration is *required* of faculty colleagues.

A post-tenure review may not even have at the end of its process the possibility of dismissal. A review could be just that: an open and frank, and hopefully nuanced discussion about contributions to law school life. Even if it does not hold out the promise of a formal sanction, it may activate, and perhaps even generate norms that might deter shirking or fighting.

205. Licata & Morreale, *supra* note 203, at 11.

206. *Id.* at 7–8.

207. Swygert & Gozansky, *supra* note 116, at 366.

208. *Id.*

209. *Id.*

210. Raymond P. Perry et al., *Faculty in Transition: A Longitudinal Analysis of Perceived Control and Type of Institution in the Research Productivity of Newly Hired Faculty*, 41 RES. HIGHER EDUC. 165, 171 (2000).

If a post-tenure review does have at the end of its process the possibility of dismissal, procedural protections are in order. Flowing from the Swygert and Gozansky suggestion, a post-tenure review committee could be charged with exhausting all reasonable attempts to *assist* faculty members who find themselves in a rut. Or, if there is a grievance that animates a faculty conflict, post-tenure review would be a forum for addressing such a grievance. Grievance procedures in the academy have sometimes effectively dealt with serious grievances, such as civil rights cases or other forms of discrimination, but not always.²¹¹ For problems that do not rise to that level, such grievance procedures are hopelessly and notoriously bureaucratic and ineffective.²¹² A post-tenure review might provide an alternative forum for airing lower-level grievances that give rise to faculty conflict and interfere with productivity. It is unlikely that it would be much worse than what most academic units currently have.

Implicit in the Swygert and Gozansky proposal, but unstated, is extra faculty oversight. For law schools embedded within universities, promotion and tenure decisions must pass through university-level committees, so that any status change based on a post-tenure review committee must also pass university muster.²¹³ The standard for dismissal is generally adequate cause,²¹⁴ and a post-tenure review process should take place against the backdrop of this high bar. But that substantive standard might be supplemented with additional hurdles, such as an evidentiary standard.²¹⁵ Any kind of a post-tenure process that *might* generate a recommendation for termination should pass a higher evidentiary bar than that of “he said, she said.”

Tenure is an inherently stressful process,²¹⁶ and post-tenure review has the potential to be more so.²¹⁷ But with some procedural protections to guard against the weaponization of such a review process to bludgeon or threaten

211. Lauren B. Edelman et al., *The Endogeneity of Legal Regulation: Grievance Procedures as Rational Myth*, 105 AM. J. SOC. 406, 447 (1999).

212. See, e.g., R. Rhodes & J. J. Strain, *Whistleblowing in Academic Medicine*, 30 J. MED. ETHICS 35, 35 (2004) (“This is not to say that venues for employee grievances and hearing complaints about harassment do not exist: they do, but they are seldom used, they subject the user to bias, and they quite often remain ineffective.”).

213. Swygert & Gozansky, *supra* note 116, at 360–67.

214. See *supra* note 94 and accompanying text.

215. Brown & Kurland, *supra* note 86, at 344.

216. H. Carol Greene et al., *Building a Support System Toward Tenure: Challenges and Needs of Tenure-Track Faculty in Colleges of Education*, 16 MENTORING & TUTORING: PARTNERSHIP IN LEARNING 429, 429 (2008).

217. Licata & Morreale, *supra* note 203, at 10 (“Because the term ‘post-tenure review’ conjures up negative images of a re-tenuring process, some institutions have purposely steered away from using it.”).

colleagues, some minimum level of communication and review would seem to be necessary to bring problematic behavior, shirking, or personal problems, out of the shadows.

B. *Involuntary Sabbaticals*

One intermediate sanction short of dismissal and potentially stemming from a post-tenure review could be an involuntary sabbatical. Sabbaticals for academics are usually considered one of the most important benefits of academia.²¹⁸ Teaching and faculty service obligations are suspended for the period of the sabbatical,²¹⁹ and the professor typically draws some level of pay less than full salary.²²⁰ I propose as an intermediate sanction for bad behavior (be it shirking or fighting), a less favorable sabbatical, one with considerably less compensation than is offered for normal, scheduled sabbaticals. It is beyond the scope of this article to fully visit the employment law issues raised by this proposal,²²¹ except to say that if dismissal after procedure is permitted, so should an involuntary sabbatical. As an intermediate sanction, the usual procedural safeguards for academics are in order,²²² but an involuntary sabbatical could serve a number of pro-cooperation goals.

First, and consistent with the traditional ideal of the sabbatical, an involuntary sabbatical could give the individual faculty member stuck in a rut the opportunity to re-tool or re-orient, and gain a fresh perspective on an overall research agenda.²²³ Shirking or fighting are often symptoms of something gone awry in a professorial career,²²⁴ and an involuntary sabbatical can play the role that normal, traditional sabbaticals are meant to play: a modestly compensated, professional time-out in the hopes that the individual can re-enter the academy with renewed purpose.²²⁵ Such individual renewal benefits the institution as a “refurbishing of its equipment.”²²⁶

218. Celina M. Sima, *The Role and Benefits of the Sabbatical Leave in Faculty Development and Satisfaction*, 105 NEW DIRECTION INSTITUTIONAL RES. 67, 67 (2000).

219. *Id.* at 71.

220. Walter Crosby Eells, *The Origin and Early History of Sabbatical Leave*, 48 AAUP BULL. 253, 253 (1962).

221. For one such review, see Megan E. Blomquist, *A Shield, Not a Sword: Involuntary Leave Under the Family and Medical Leave Act*, 76 WASH. L. REV. 509 (2001).

222. For example, those briefly noted in the text accompanying note 208.

223. Sima, *supra* note 218, at 72.

224. Baldwin, *supra* note 106, at 116.

225. Sima, *supra* note 218, at 72–73.

226. Eells, *supra* note 220, at 253.

Sabbatical requests typically include the submission of a research plan for how the time off of teaching and service will be spent,²²⁷ and the submission of a report afterwards that describes how it was actually spent, and what was accomplished.²²⁸ Failure to accomplish the goals set out in the sabbatical report usually raises eyebrows;²²⁹ such a failure following an involuntary sabbatical could lead to dismissal. Such an exercise would appear to be an excellent opportunity for an individual faculty member and her colleagues to discuss the nature of contributions to the law school. Again, it is natural to be skeptical that such a process will lead to the hoped-for outcomes, but it compares favorably with the alternative of putting up with unsustainably bad behavior.

Second, if an involuntary sabbatical is onerous enough, it can serve as a deterrent to bad behavior. This raises, however, the delicate question of salary during involuntary sabbatical, one that is critical in determining its failure or success as an intermediate sanction for bad behavior. It is worth identifying, without necessarily resolving, the tension in setting a compensation rate: an involuntary sabbatical that provides too little salary may truly infringe upon the rights of faculty members. On the other hand, an involuntary sabbatical with too much salary, looking too much like a regular, sought-after benefit, would fail utterly to deter bad behavior, and would only engender resentment leading to more bad behavior. Striking the right balance could require some external input, such as from a university body.

Third, and finally, apart from the usual institutional benefits of an individual taking a sabbatical, an involuntary sabbatical as an intermediate sanction has the benefit of removing an individual that is somehow a problem on a faculty. Shirking or fighting are so poisonously demoralizing that even costly attempts to remove—hopefully temporarily—problematic individuals are cost-effective. And if the involuntary sabbatical actually works to rejuvenate a faculty member and bring her back into the productive fold of the faculty, then the cost will have paid for itself many times over.

VI. CONCLUSION

The results reported in this article provide some support for the first hypothesis: that up to a certain point, some faculty turnover either enhances collegiality, or is a sign of intellectual health, not strife. The results also provide some support for the second hypothesis (less so than for the first hypothesis): that a strong local quality of life may lead to lower collegiality. It may surprise

227. Sima, *supra* note 218, at 69 (referencing to “sabbatical plans”).

228. *Id.* (“[F]aculty must be required to return to service after the leave and must file a sabbatical report.”).

229. *Id.* at 68.

some that faculty turnover—which sounds bad—has a positive effect on faculty collegiality and collaboration. It may also surprise some that high local quality of life—which sounds good—may have the opposite effect (though the results in this study are very modest). But the interactive nature of faculty cooperation, along with the institution of tenure, render it an organization that is unlike many others.

What the results suggest is that faculty turnover is not necessarily a negative reflection on an academic unit, but may instead be a sign of intellectual health. It could be that a productive faculty means that some will be lost to lateral moves. To the extent that central university administrations view faculty turnover as a failure—the more turnover the greater the failure—this article suggests that such a view could be mistaken.

Moving forward, the question remains of how to get law faculty to cooperate better and collaborate more on scholarly output. This article suggests that introducing a level of dynamism might be required, even if it impinges upon (without, it bears repeating, significantly curtailing) the institution of tenure. This article suggests some steps that may act to dis-incentivize bad behavior that may depress cooperation and collaboration: shirking and fighting. First, the institution of post-tenure review, even in its most mild and benign forms, holds great potential to bring into the open festering problems that may lead faculty to shirk or fight. Second, and following on the suggestion of instituting post-tenure reviews, involuntary sabbaticals may serve as another mechanism for both dis-incentivizing bad behavior and also defusing faculty conflicts. The chances of success for either of these processes are unclear, but the costs of instituting such procedures are far outweighed by the potential benefits of doing so. For too long, law faculties have suffered silently through intra-faculty conflicts that have been far too costly for the academy, and for law students.

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