

NATIONAL
ASSOCIATION
of SCHOLARS

November 25, 2019

WASC Senior College and University Commission (WSCUC)
985 Atlantic Avenue, Suite 100
Alameda, CA 94501

Re: Third-Party Comment on WSCUC Accreditation Review of UCLA

Dear WASC Senior College and University Commission,

I join in support of Dr. James E. Enstrom's November 4, 2019 Third-Party Comment about the University of California Los Angeles' (UCLA) failure to live up to its own Mission Statement to support academic freedom, academic diversity, and research integrity. UCLA engaged in retaliatory dismissal of Dr. Enstrom, failed to acknowledge publicly its violation of academic freedom, and has undertaken no reform of its own procedures to prevent future, similar violations of academic freedom. I urge WSCUC to call on UCLA to take these two actions, as a sign that it has properly institutionalized its own commitments to academic freedom, academic diversity, and research integrity.

I write as President of the National Association of Scholars (NAS). NAS is a network of scholars and citizens united by our commitment to academic freedom, disinterested scholarship, and excellence in higher education. As part of our mission, we support academic freedom and intellectual diversity throughout American higher education. We have more than thirty years of experience providing support for the principles and institutional practice of intellectual diversity.

UCLA has failed to live up to its commitment to "academic freedom in its fullest terms." Dr. Enstrom lost his research professor position at UCLA in 2010, apparently as a result of a desire by his colleagues to retaliate against him for:

- 1) publishing research that provided evidence against the scientific research used by the California Air Resources Board (CARB) to justify new rules to reduce the diesel particulate matter portion of fine particle air pollution (PM2.5); and
- 2) publicizing a pattern of abuses by CARB, including a fraudulent Ph.D. of the lead author of the 2008 CARB report that provided the public health justification for the diesel regulations; failure of members of CARB's scientific review panel (SRP) to comply with the three-year term limit mandated by state law (two members of the

SRP have served for over 25 years); and a pervasive tendency to interpret the range of scientific evidence in a way that supported a single, tendentious position.

UCLA failed to respond to protests by both the Foundation for Individual Rights in Education and the American Center for Law & Justice (ACLJ).¹ UCLA ultimately provided compensation to Dr. Enstrom, but only after ACLJ sued it. UCLA has not admitted wrongdoing, expressed remorse, provided any punishment to any individual for their mistreatment of Dr. Enstrom, offered Dr. Enstrom any opportunity for another UCLA position, nor instituted institutional reforms to prevent similar violations of UCLA's institutional commitment to academic freedom.²

Although he has been at a great academic disadvantage since his 2010 UCLA termination, Dr. Enstrom has continued to conduct important epidemiologic research. Indeed, in 2017 and 2018 he published seminal reanalyses of American Cancer Society data that have confirmed and expanded upon the validity of the research findings that got him terminated. Indeed, he has now shown that PM2.5 does not cause premature deaths anywhere in the United States, not just in California. This finding has multi-billion-dollar implications for air pollution regulatory policy in the United States and California. He has described various aspects of his recent research in his Comment to the EPA Clean Air Science Advisory Committee (CASAC) Policy Assessment of the Particulate Matter National Ambient Air Quality Standard (NAAQS).³

UCLA's wrongful termination of Dr. Enstrom is part of a larger pattern of behavior by UCLA that supports an improper commitment to political activism, in place of disengaged intellectual inquiry. This political activist behavior is documented in a detailed 2012 National Association of Scholars Report.^{4 5} This pattern of behavior warrants a systemic reform effort by UCLA—a systemic effort that can best be achieved and validated via accreditation.

I call on WSCUC, as part of its accreditation procedures of UCLA, to ask UCLA to produce documentation to explain how its procedures to protect intellectual diversity and academic freedom failed to protect Dr. Enstrom, and documentation on planned new procedures to ensure that such misbehavior does not occur again. I believe that WSCUC's accreditation mission supports such a request, and that UCLA ought to provide evidence of substantive changes, to support its own mission, as part of the accreditation process.

Yours sincerely,

A handwritten signature in blue ink, appearing to read "Peter W. Wood".

Peter W. Wood, PhD

President

National Association of Scholars

See attachments following this letter:

¹ Adam Kissel, Director, Individual Rights Defense Program, Foundation for Individual Rights in Education, Letter to Chancellor Gene D. Block, University of California, Los Angeles, August 26, 2010; David French, Senior Counsel, American Center for Law & Justice, Letter to President Mark G. Yudof, University of California, Los Angeles, May 21, 2012.

² Geoffrey C. Kabat, "Why UCLA's Firing of a Lone Dissenting Voice Should Worry Us," National Association of Scholars, December 5, 2011; Peter Bonilla, "James Enstrom versus UCLA: Terminating Environmental Debate," *Academic Questions* 30, 4 (2017), https://www.nas.org/academic-questions/30/4/james_enstrom_versus_ucla_terminating_environmental_debate.

³ James E. Enstrom, EPA CASAC Comment "Criticism of EPA-452/P-19-001 September 2019 Policy Assessment for the Review of the National Ambient Air Quality Standards for Particulate Matter, External Review Draft" [https://yosemite.epa.gov/sab/sabproduct.nsf/F729E7D8E248A2C5852584970009565A/\\$File/Enstrom+Comment+to+CASAC+re+090519+EPA+PM+PA+101719.pdf](https://yosemite.epa.gov/sab/sabproduct.nsf/F729E7D8E248A2C5852584970009565A/$File/Enstrom+Comment+to+CASAC+re+090519+EPA+PM+PA+101719.pdf)

⁴ California Association of Scholars, *A Crisis of Competence: The Corrupting Effect of Political Activism in the University of California* (National Association of Scholars, 2012), https://www.nas.org/storage/app/media/Reports/A%20Crisis%20of%20Competence/A_Crisis_of_Competence.pdf

⁵ Peter Berkowitz, "How California's Colleges Indoctrinate Students: A new report on the UC System documents the plague of politicized classrooms," Wall Street Journal, March 31, 2012 <http://online.wsj.com/article/SB10001424052702303816504577312361540817878.html>; Debra J. Saunders, "University echo chamber drowns out diverse voices," San Francisco Chronicle, April 1, 2012 <http://www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2012/03/30/INLN1MNUVT.DTL>



Foundation for Individual Rights in Education

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August 26, 2010

Chancellor Gene D. Block
Chancellor's Office
University of California, Los Angeles
Box 951405, 2147 Murphy Hall
Los Angeles, California 90095-1405

URGENT

Sent by U.S. Mail and Facsimile (310-206-6030)

Dear Chancellor Block:

As you know from our August 14, 2009, letter concerning a separate matter, the Foundation for Individual Rights in Education (FIRE; www.thefire.org) unites civil rights and civil liberties leaders, scholars, journalists, and public intellectuals across the political and ideological spectrum on behalf of liberty, legal equality, due process, freedom of association, religious liberty and, as in this case, freedom of speech on America's college campuses. I appreciate Senior Campus Counsel Patricia M. Jasper's prompt and satisfactory resolution of the previous matter involving First Amendment rights.

FIRE is disappointed to be writing to you again about the violation of First Amendment rights on your campus. FIRE is very concerned about the threats to freedom of speech, academic freedom, and due process posed by University of California, Los Angeles' (UCLA's) decision not to rehire Dr. James E. Enstrom, a faculty member in the UCLA School of Public Health (SPH). Non-rehire decisions made because of a faculty member's protected expression, of which Enstrom's case appears to be an example, violate the First Amendment.

This is our understanding of the facts; please inform us if you believe we are in error. Dr. Enstrom has continuously held a non-tenured faculty position in SPH since 1976. He has consistently been rehired by UCLA. Since 2004, he has been rehired into UCLA's Department of Environmental Health Sciences (EHS). His research on environmental health issues falls squarely within EHS' research mission. Over the years, he and a few of his SPH colleagues have sometimes disagreed strongly about research on environmental health issues—for example, on the extent of the threat to public health posed by certain air pollutants, a topic of Enstrom's research which has been the subject of intense debate in California.

Enstrom also was a successful whistleblower regarding members of the Scientific Review Panel on Toxic Air Contaminants for the California Air Resources Board who, according to a lawsuit filed by the Pacific Legal Foundation (PLF) in June 2009, had been serving beyond the three-year legal limit on their terms of office without being properly re-nominated. One such member was EHS faculty member John Froines. As a direct result of Enstrom's advocacy on this issue, Froines was replaced on the panel effective July 22, 2010. According to Enstrom, at least six of the nine panel members were replaced in 2010 as a direct result of Enstrom's advocacy and the PLF lawsuit.

Enstrom has faced retaliation as a result of his whistleblowing and as a result of his research. According to a February 9, 2010, e-mail from Enstrom to EHS Chair Richard J. Jackson, he first learned about the retaliation on December 14, 2009, when he learned that, without his knowledge or permission, his salary had been charged to various funds in place of Fund 59605, which had been "an active source of ongoing support that paid my entire UCLA salary." Enstrom also learned in January 2010 that this fund had been cut off without Enstrom's knowledge, causing the other funds to be depleted.

Then, according to a June 15, 2010, letter from Enstrom to SPH Dean Linda Rosenstock, Enstrom faced further retaliation in February 2010, when Jackson informed Enstrom that Enstrom was being "indefinitely ... laid off" as of April 21, 2010, due to lack of funding for his position. Ever since his February 9 e-mail, Enstrom has been asking for a full accounting of his research funds dating back to 2007, but he has not received a response of any substance. In his June 15 letter, Enstrom calculated that there was sufficient funding (including unused vacation and sick leave) to employ him at least through December 2011. UCLA officials appear to have subsequently abandoned this particular justification for severing Enstrom's employment.

On June 9, 2010, however, Enstrom learned of still another instance of retaliation from his department. He received an e-mail from Jackson stating that the EHS faculty (including Froines) had voted not to rehire Enstrom. Jackson also wrote Enstrom a letter on June 9 stating that Enstrom would be "indefinitely laid off" effective June 30, 2010. Jackson wrote that the decision was made for "programmatic and financial reasons," adding:

Programmatically, your research is not aligned with the academic mission of the Department, and your research output and ability to secure continued funding does not meet the minimum requirements for the Department. In reviewing financial resources, the Department is unable to continue your current appointment.

Such a layoff timeline violates UCLA's "Procedures for Non-Reappointment of an Appointee Who Has Served Eight or More Consecutive Years," of which section 137-32 requires that "The University shall provide a written Notice of Intent not to reappoint at least sixty (60) days prior to the appointment's specified ending date." (Incidentally, the American Association of University Professors recommends 12 months in such cases.)

On June 30, 2010, SPH Associate Dean for Academic Programs Hilary Godwin wrote Enstrom extending his appointment for an additional 60 days, ending August 30. Godwin wrote:

The basis for non-reappointment is that the faculty of Environmental Health Sciences have determined that your research is not aligned with the academic mission of the Department, and that your research output and other contributions do not meet the department minimums.

Enstrom appealed this decision, following UCLA's "Procedures for Non-Reappointment of an Appointee Who Has Served Eight or More Consecutive Years," via a July 14 letter to Vice Chancellor for Academic Personnel Thomas Rice. Rice deferred to Godwin, who rejected the appeal. Godwin sent Enstrom a letter on July 29, stating:

As previously notified, the reason for non-reappointment is [that] the faculty of the Department of Environmental Health Sciences has determined that your research is not aligned with the academic mission of the Department, and your research output and other contributions do not meet the department requirements.

In both Enstrom's June 15 and July 14 letters, Enstrom challenged the decisions against him. In particular, he demonstrated that his research on environmental health is fully aligned with the "mission" of EHS and that his research output has been robust. He also argued that this and the other grounds given by Jackson and Godwin for non-rehire are merely pretextual, hiding the faculty's dislike for his research findings and his advocacy against such a prominent EHS faculty member as Froines.

In the absence of any evidence that Enstrom has failed to meet "department minimums" or "department requirements" or even that such standards exist, we agree with Enstrom's characterization of the non-rehire decision as pretextual. According to Enstrom, his research output has changed little over time. Furthermore, he has never been told what the "department requirements" or "department minimums" are, and he has never seen any statement of what these requirements are, if they exist at all. He also is unaware that the so-called requirements have been used to assess anyone else in the department, let alone to justify a decision not to rehire.

On August 12, Enstrom filed a timely grievance challenging his non-reappointment. According to Enstrom, a Grievance Liaison has found merit in the grievance and has referred it to Rice so that he can select a Step II Reviewer of the grievance, following UCLA procedure.

Again, all signs are that UCLA would not have made its non-rehire decision but for the apparent animus felt by many of his peers as a result of Enstrom's research and his whistleblowing—all instances of protected speech. As a public university, UCLA is both legally and morally bound by the First Amendment's guarantees of freedom of expression and academic freedom. The Supreme Court has held that academic freedom is a "special concern of the First Amendment" and that "[o]ur nation is deeply committed to safeguarding academic freedom, which is of transcendent value to all of us and not merely to teachers concerned." *Keyishian v. Board of Regents*, 385 U.S. 589, 603 (1967) (internal citations omitted). As the Supreme Court wrote in *Sweezy v. New Hampshire*, 354 U.S. 234, 250 (1957):

The essentiality of freedom in the community of American universities is almost self-evident. No one should underestimate the vital role in a democracy that is played by those

who guide and train our youth. To impose any strait jacket upon the intellectual leaders in our colleges and universities would imperil the future of our Nation. ... Teachers and students must always remain free to inquire, to study and to evaluate, to gain new maturity and understanding; otherwise our civilization will stagnate and die.

This principle holds whether the subject is communism, Catholicism, climate change, or the effects of air pollution. We trust that you understand that the First Amendment's protections (as well as the free speech protections of the California Constitution) fully extend to public universities like UCLA. See, e.g., *Keyishian*, 605-06 (“[W]e have recognized that the university is a traditional sphere of free expression so fundamental to the functioning of our society that the Government's ability to control speech within that sphere by means of conditions attached to the expenditure of Government funds is restricted by the vagueness and overbreadth doctrines of the First Amendment”); *Healy v. James*, 408 U.S. 169, 180 (1972) (citation omitted) (“[T]he precedents of this Court leave no room for the view that, because of the acknowledged need for order, First Amendment protections should apply with less force on college campuses than in the community at large. Quite to the contrary, ‘the vigilant protection of constitutional freedoms is nowhere more vital than in the community of American schools’”).

Non-tenured faculty members do not have diminished First Amendment rights because of their employment status. Adverse employment action against a non-tenured faculty member, when that action is due to the faculty member's protected expression, violates the faculty member's First Amendment rights. This includes decisions not to rehire adjunct faculty members who have a reasonable expectation of being rehired. See *Mt. Healthy City Sch. Dist. Bd. of Educ. v. Doyle*, 429 U.S. 274, 283 (“[A teacher's] claims under the First and Fourteenth Amendments are not defeated by the fact that he [does] not have tenure.”); *Mabey v. Reagan*, 537 F.2d 1036, 1045 (9th Cir. 1976) (“Withal, it is our duty to protect First Amendment values. Initially, our concern is to guard the rights of the terminated instructor. But, more importantly, we examine alleged First Amendment violations because of their potential chill on others, especially those situated like the complainant. **Although a person's tenure status is irrelevant to the First Amendment inquiry** (*Perry v. Sindermann* (1972) 408 U.S. 593, 597–98, 33 L. Ed. 2d 570, 92 S. Ct. 2694), our close examination is particularly appropriate where, as here, a complex of reasons may as well mask an unlawful motive as legitimately motivate a refusal to rehire ...”) (emphasis added).

While a public university is often allowed to choose not to rehire a non-tenured faculty member for a very wide variety of reasons, or for no reason at all (unless contractual agreements state otherwise), it is not permitted to make such a decision for a constitutionally impermissible reason, such as whistleblowing retaliation or as punishment for protected speech. Yet all signs are that this is just what has happened here. UCLA appears to have used hitherto unknown, ambiguous, or unenforced funding and research output “minimums” as mere pretexts for accomplishing what it could not otherwise accomplish lawfully. But for retaliation for Enstrom's protected expression, he would still be employed by UCLA. This is impermissible.

Enstrom's Case Requires Immediate Resolution

Because Enstrom's case involves the violation of a faculty member's rights, you have not only the authority but also the moral and legal responsibility to work to resolve the situation as quickly as possible. Every day that the case continues is a deeper violation of academic freedom

and freedom of speech and a more thorough chilling of faculty speech at UCLA. Merely waiting for the process of the grievance to run its course does not absolve you or UCLA of the moral and legal responsibility to immediately reverse the decision not to rehire Enstrom.

FIRE urges you to immediately reverse the decision not to rehire Enstrom. We also request that you ensure that he receives the full financial accounting he has requested. Furthermore, if any written evidence of "department minimums" does exist, Enstrom must receive a copy of it in order to properly defend himself.

In the alternative, if you choose not to recognize Enstrom's rights in this matter, FIRE requests that you preserve the status quo while Enstrom has a pending grievance at UCLA, and keep Enstrom employed as a faculty member at UCLA until his grievance is resolved. This status will permit Enstrom to seek additional research funding in order to demonstrate the possibility of funding for employment beyond December 2011.

We urge UCLA to show the courage necessary to admit its error. Please spare the university the deep embarrassment of fighting against the Bill of Rights, by which it is legally and morally bound. While we hope this situation can be resolved amicably and swiftly, we are committed to using all of our resources to see this situation through to a just and moral conclusion.

We have enclosed a waiver that permits UCLA to fully discuss Enstrom's case with us. Because Enstrom's last day at UCLA is scheduled for August 30, we ask for a response in writing by 5:00 p.m. PT on August 30, 2010.

Sincerely,



Adam Kissel

Director, Individual Rights Defense Program

Encl.

cc:

Patricia M. Jasper, Senior Campus Counsel

Kevin S. Reed, Vice Chancellor-Legal Affairs and Associate General Counsel

Charles F. Robinson, General Counsel and Vice President for Legal Affairs

William Cormier, Director, Administrative Policies & Compliance

Richard Jackson, Chair, Department of Environmental Health Sciences

Linda Rosenstock, Dean, School of Public Health

Hilary Godwin, Associate Dean for Academic Programs, School of Public Health

Susan Fisher, Manager, Human Resources, School of Public Health

Esther Hamil, Assistant Director, Academic Personnel Office

Thomas Rice, Vice Chancellor, Academic Personnel



May 21, 2012

VIA FACSIMILE AND FEDERAL EXPRESS

President Mark G. Yudof
University of California
President's Executive Office
1111 Franklin Street
Oakland, CA 94607
Fax: 510.987.9086

***Re: University of California's Discriminatory and Retaliatory Treatment of
Dr. James E. Enstrom***

Dear President Yudof:

The American Center for Law and Justice (ACLJ) represents Dr. James E. Enstrom, research professor at UCLA, regarding UCLA's unlawful retaliation against Dr. Enstrom after Dr. Enstrom exercised his constitutional right to free speech by exposing "junk science," scientific misconduct, and improper political activities on the part of UCLA professors and significant California state agencies. Unless stopped, UCLA's retaliatory activities will culminate in Dr. Enstrom's termination on June 30, 2012.

As you may be aware, the ACLJ is an organization dedicated to the defense of constitutional liberties secured by law. ACLJ attorneys have argued before the Supreme Court of the United States in a number of significant cases involving the freedoms of speech and religion. *See, e.g., Pleasant Grove City v. Summum*, 129 S. Ct. 1523 (2009) (unanimously holding that the Free Speech Clause does not require the government to accept counter-monuments when it has a war memorial or Ten Commandments monument on its property); *McConnell v. FEC*, 540 U.S. 93 (2003) (unanimously holding that minors enjoy the protection of the First Amendment); *Lamb's Chapel v. Center Moriches Sch. Dist.*, 508 U.S. 384 (1993) (unanimously holding that denying a church access to public school premises to show a film series on parenting violated the First Amendment); *Bd. of Educ. v. Mergens*, 496 U.S. 226 (1990) (holding by an 8-1 vote that allowing a student Bible club to meet on a public school's campus did not violate the Establishment Clause); *Bd. of Airport Comm'rs v. Jews for Jesus*, 482 U.S. 569 (1987) (unanimously striking down a public airport's ban on First Amendment activities).

The purpose of this letter is to inform you of the applicable facts relevant to Dr. Enstrom's situation at UCLA, encourage you to remedy the clear constitutional violations that have taken place to date, and request that you restore Dr. Enstrom's position at UCLA

★

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without further delay. The facts to be presented herein, taken together, present a picture of a university casting about for reasons to justify, in a highly selective manner, its termination of an accomplished and productive researcher who has held his faculty position at the UCLA School of Public Health since 1976 – a researcher whose effective public advocacy and respect for scientific integrity had made him vulnerable to, and eventually resulted in, retaliation in the form of termination.

FACTUAL BACKGROUND

For much of the last four years, Dr. Enstrom has aggressively and effectively exposed comprehensive wrongdoing, flawed science, and procedural irregularities within the University of California (UC), the California Air Resources Board (CARB), and the Scientific Review Panel on Toxic Air Contaminants (SRP). Dr. Enstrom has published major peer-reviewed epidemiologic findings showing that there is no relationship between fine particulate air pollution and total mortality in California; developed strong evidence that this relationship has been systematically misrepresented by prominent UC scientists and CARB since 2000; exposed the fraudulent credentials of a key CARB “scientist” whose 2008 report on this relationship was the prime justification for a new and draconian (multi-billion dollar) regulatory scheme in California; and exposed the lengthy and illegal tenure of UCLA Environmental Health Sciences (EHS) Professor John R. Froines and other members of the SRP. Dr. Enstrom’s efforts clearly influenced the revision of both the 2008 CARB report and the new CARB regulations.

In addition, Dr. Enstrom met with you in Oakland on November 12, 2009, to discuss these serious matters, particularly regarding Dr. Froines and the need to make new SRP nominations. Your early 2010 nominations resulted in the replacement of five of the nine SRP members, including Dr. Froines. However, you renominated Dr. Froines to serve on the SRP on November 2, 2010, and again on February 7, 2012, and he continues to serve as SRP Chair to date.

Again and again, Dr. Enstrom’s scientific and policy critiques regarding the relationship between fine particulate matter and mortality in California have been vindicated. Dr. Enstrom’s research and critiques have had significant scientific and regulatory impact in California and the United States, as was amply documented by numerous scientific, business, and legal witnesses at his April 2011 APM 140 Step III-B Hearing. For example, Dr. Enstrom’s research was cited in a detailed November 15, 2011 critique of US EPA’s particulate matter science and regulations by Drs. Andy Harris and Paul Broun, two Congressmen who oversee the EPA.

RETALIATION

Unfortunately, however, just as Dr. Enstrom’s public criticisms were beginning to have a significant impact in early 2010, he abruptly received the first of *several* inconsistent notices that he was being terminated – that his 34 year research faculty career at UCLA was over.

First, in February 2010, the University attempted to terminate Dr. Enstrom by claiming his research funds were exhausted. However, after Dr. Enstrom documented that he had research funds, along with accrued vacation and sick leave, sufficient to pay his salary through 2011, the funding issue was withdrawn as justification for termination. What is more, EHS has refused to

provide Dr. Enstrom with an explanation for serious irregularities in the accounting of his funds at UCLA, including failure to provide monthly fund summaries, unauthorized use of his unrestricted research funds, and overcharging of indirect costs. In addition, Dr. Enstrom has not been able to submit applications for new funding through the University since early 2010. Finally, the University has failed to pay Dr. Enstrom any salary since June 2010, even though substantial salary funds would be available if Dr. Enstrom were allowed access to his accrued sick leave and the research funds that were incorrectly used by the University to pay indirect costs.

Next, in June 2010, the University sent a notice saying that Dr. Enstrom was being terminated because his research was “not aligned with the academic mission of the Department,” and his research and other contributions “did not meet the department requirements.” In the October 20, 2010 APM 140 Step II Review by Dr. Richard H. Gold, however, the University rejected its own assertion that Dr. Enstrom’s research wasn’t aligned with the department’s mission.

Regarding Dr. Enstrom’s research, the April 4-8, 2011 APM 140 Step III-B Hearing revealed a series of undeniable truths:

- Dr. Enstrom was given *no notice* of expected “department minimums” in research and productivity;
- Dr. Enstrom received no warning that his pace of research was allegedly inadequate;
- Dr. Enstrom’s productivity and research during 1976-2010 had actually increased in the last five years (2005 to 2010) compared to his average five-year research production in the twenty-nine (29) years prior. In other words, his productivity was *increasing*;
- Dr. Enstrom had been successfully reappointed based on direct evaluation by four Deans and two EHS Chairs prior to Dr. Jackson who suddenly and inappropriately changed the method of evaluation to a self-described “unusual” Departmental review that EHS “hadn’t done for another researcher;”
- While supposedly evaluating Dr. Enstrom’s scholarship, Dr. Jackson and other key professors (including Dr. Froines) *did not even bother to read* Dr. Enstrom’s publications and thus had no basis to objectively evaluate his work;
- Even as he refused to read Dr. Enstrom’s publications, Dr. Froines admitted that at least one of Dr. Enstrom’s influential external critics was so blinded by animosity against Dr. Enstrom that he could not read his work objectively;
- When Dr. Enstrom appealed his termination, Dr. Jackson disingenuously justified his claims about Dr. Enstrom by producing a 1995 document regarding expected publication rates for faculty members that Dr. Jackson *had not seen* and *did not even know existed* when he decided to fire Dr. Enstrom;
- Not only had Dr. Jackson not seen this 1995 document, neither had Dr. Enstrom, who was completely blindsided by its existence; and
- The 1995 document, by its own terms, *does not even apply* to an individual in Dr. Enstrom’s non-Senate research faculty position; it applies to advancement and promotion, not retention, of Senate faculty members.

In addition, during the Hearing, Dr. Jackson put forward yet another justification for firing Dr. Enstrom – one that was entirely omitted from his written non-reappointment notices. According to Dr. Jackson, he fired Dr. Enstrom because Dr. Enstrom allegedly misrepresented his title, calling himself a “Research Professor” rather than a “Researcher.” Yet Dr. Enstrom presented uncontradicted evidence that this was precisely the title that the University itself used to publicly describe him since the 1990s, long before Dr. Jackson arrived at UCLA in 2008.

Ultimately, in April 2011, during Dr. Enstrom’s APM 140 Step III-B Hearing, Hearing Officer Sara Adler failed to address critical evidence, ignored Dr. Enstrom’s First Amendment claims and UCLA’s mismanagement of Dr. Enstrom’s funds, and further set the stage for federal litigation. Despite Dr. Enstrom’s appeal of Hearing Officer Adler’s June 2011 decision to uphold his termination, in August 2011 Vice Chancellor Carole Goldberg also upheld his termination, but postponed the termination date to June 30, 2012.

It is important to note that the UCLA Academic Senate’s Academic Freedom Committee, comprised of professors from various disciplines within the University, has expressed its “unanimous concern” that the School of Public Health’s action “may represent a violation of academic freedom.” The Academic Freedom Committee was right to express its concern. While the Hearing Officer may refuse to consider the University’s financial misdealings, refuse to evaluate Dr. Enstrom’s First Amendment claims, and refuse to investigate Dr. Enstrom’s claims of misconduct and retaliation, federal courts will have no reluctance to examine the totality of the circumstances and no reluctance to refer credibility determinations to a jury.

I will not herein restate the application of governing law to this situation as previous letters to the University have thoroughly and adequately done. Please be advised, however, that it is clear that the University has been plainly looking for pretexts to fire Dr. Enstrom, all while denying him access to a single scrap of paper outlining the alleged requirements of his position or any pre-termination notice that his performance was deficient. While Chancellor Gene Block, Vice Chancellor Goldberg, and Hearing Officer Adler, among others, have chosen to look at the yawning absence of evidence in the University’s favor and believed every word of the University’s multiple and inconsistent denials, a jury may not be so forgiving.

CONCLUSION

Please be advised that this letter serves as a final effort to avoid imminent litigation. Dr. Enstrom has provided considerable evidence that his termination is improper under APM 137 and is retaliation in direct response to his protected speech. This evidence is strong enough to cause the University’s Academic Freedom Committee to express “unanimous concern,” strong enough to reject the Hearing Officer Adler’s incomplete decision, and strong enough to take before a jury in federal court.

Good science requires dissent. A community of scholars cannot exist without debate. By acting to terminate the lone dissenter in EHS, the University cast a “pall of orthodoxy” on campus, violated its own Mission Statement, and defied the First Amendment. Dr. Enstrom requests that his termination be set aside and that he immediately be allowed to continue his research faculty position in an appropriate unit on campus, if not in EHS itself.

I respectfully request a written response to this letter and the requests herein by **June 1, 2012**. If the University ultimately chooses not to adequately protect Dr. Enstrom's academic freedom, then he will pursue all available legal remedies.

Respectfully,

AMERICAN CENTER FOR LAW & JUSTICE

A handwritten signature in black ink, appearing to read 'D. French', written in a cursive style.

David French
Senior Counsel

cc: Dr. James E. Enstrom

Why UCLA's Firing of a Lone Dissenting Voice Should Worry Us

December 05, 2011 By [Geoffrey C. Kabat](#)



In February 2010 UCLA epidemiologist James Enstrom was informed that he would not be reappointed as research professor – a position he had held for thirty-four years.

Although the department offered as a reason that his research was not “aligned with the department’s mission,” the decision -- taken at a closed meeting that excluded Enstrom -- appears anything but academic.

Enstrom is an established researcher who has conducted large studies in diverse populations to address important health issues. In the early 2000s he started doing research on fine particle air pollution and mortality at a time when the state of California was considering stringent new regulations of diesel emissions. His reading of his own results and those of his peers put him in direct conflict with a powerful nexus of scientists and policymakers involved in setting air quality standards.

In 2008 the California Air Resources Board, or CARB, proposed and approved new rules to reduce the diesel particulate matter portion of fine particle air pollution (PM2.5), which can penetrate deep into the lungs. In support of this goal, a 2008 CARB report claimed that 18,000 premature deaths per year in California were caused by breathing PM2.5.



Enstrom believed that CARB’s claim was not supported by the evidence. While major studies in the mid-1990s had shown a weak association nationwide of exposure to PM2.5 with mortality in the 1980s, several more recent studies, including Enstrom’s, have shown that this association was not significant in California. In fact, the evidence is consistent in showing no association of PM2.5 with mortality in California.

In addition, Enstrom has tried to put PM2.5 health effects in perspective by pointing out that California is a very healthy state, with the fourth lowest total age-adjusted death rate among the fifty states.

Enstrom felt that the enactment of additional stringent regulations should be based on an honest reading of the

scientific evidence, rather than one slanted to support a regulatory agenda. In addition, he argued that the broader consequences of the proposed regulations should be taken into account, including their impact on California's already depressed economy.

But he went further. He delved deep into CARB's regulatory process – something no one else had successfully done. What he found was a pattern of abuses, including a fraudulent Ph.D. of the lead author of the 2008 CARB report that provided the public health justification for the diesel regulations; failure of members of CARB's scientific review panel (SRP) to comply with the three-year term limit mandated by state law (two activist members of the SRP have served for over 25 years); and a pervasive tendency to interpret the evidence in a way that supported its position.^[1]

Due to Enstrom's persistence and outspokenness, five of the nine SRP members were replaced in 2010, and CARB was forced to modify its 2008 diesel regulations in 2010.

None of this activity has endeared Enstrom to powerful environmental activists at the University of California and CARB. Six senior members of Enstrom's department are involved in the diesel pollution issue, and UCLA's Southern California Particle Center has received tens of millions of dollars in research grants based on the contention that PM2.5 has an important impact on health. With his scrupulously-documented critique of air pollution epidemiology, Enstrom poses a threat to enormous vested interests.

It is in this light that the treatment of Enstrom by UCLA becomes intelligible. Although his position has been extended through June 2012, he has had to spend the past two years defending himself and has not been able to obtain new external funding to support his position and research. Also, he has never been allowed to present his work to his peers at UCLA.

Enstrom's experience, which he terms "Kafkaesque," raises pointed concerns about the politicization of science when it comes to high-stakes environmental and regulatory issues. When a proven scientist is silenced because his point of view conflicts with entrenched interests, and when the commitment to open debate, academic freedom, and due process are unceremoniously thrown aside, the result is not likely to be a well-grounded policy.

(Disclosure: I have collaborated with Dr. Enstrom on two scientific papers and can directly attest to the honesty and integrity of his research).

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^[1] Enstrom has meticulously documented every step in his attempt to obtain a hearing for the relevant science and has posted all relevant documents (including published papers, unpublished documents, correspondence, and public comments on the CARB review process) at www.scientificintegrityinstitute.org.

James Enstrom vs. UCLA: Terminating Environmental Debate

Peter Bonilla

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In the grand scheme of whistleblowing settlements, the \$140,000 that epidemiologist James Enstrom received in 2015 from the University of California at Los Angeles (UCLA) to settle his 2012 wrongful termination lawsuit was fairly modest. Add another zero to the sum and then multiply it by four or five, and you've got an above-the-fold story, but Enstrom's dropped to footnote status fairly quickly. Those reading about Enstrom's case may have noted that his research evaluated levels of diesel particulate matter in the air, said, "Good for him," on the settlement, and moved on to the next story. After all, how does this particular issue stand to affect me?

By quite a lot, it turns out. In this instance, for Californians it's their money, after all, that goes into paying such settlements—and public money dispensed to settle whistleblower cases is money that could almost by definition have been put to better use. Also, while it's easy to gloss over this, the issues at play in Enstrom's case have implications well beyond the proverbial ivy-covered gates of his institution. The scientific consensus that Enstrom felt obliged to oppose in light of his own research findings has significant influence over state clean air policies, which affect not only public health but also the welfare of multimillion-dollar industries—and the many workers these businesses employ. James Enstrom is therefore a case study in why protecting academic freedom, often viewed from outside the academy as a quaint, esoteric concept, truly does serve the public interest.

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Controversy

Enstrom had been a researcher in the Department of Environmental Health Sciences (EHS) at UCLA's School of Public Health since 1976, nearly thirty years, when the journal *Inhalation Toxicology* published "Fine Particulate Air Pollution and Total Mortality among Elderly Californians, 1973–2002," a paper based on the results of his long-term research.¹ The 2005 paper fell squarely within EHS interests and was something of a shot across its bow.

Enstrom's research examined the long-term effects of particulate matter (the sum of all solid and liquid particles, many of which are hazardous, suspended in air) 2.5 micrometers (two millionths of a meter) or less in diameter, or PM_{2.5}, to employ the scientific parlance. His findings, as he explained in his paper, "[did] not support a current relationship between fine particulate pollution and total mortality in elderly Californians, but they do not rule out a small effect, particularly before 1983."²

This statement may seem perfectly anodyne to the nonexpert, but within Enstrom's community it was a controversial finding. Several of his EHS colleagues publicly supported a causal link between elevated PM_{2.5} levels and increased risk of mortality. One of them, John Froines, also served on the Scientific Review Panel (SRP) of the California Air Resources Board (CARB), a state agency that sets, among other controls, regulatory limits on diesel emissions—precisely the sort of emissions addressed in Enstrom's research. Froines was, in fact, on record in favor of setting new emissions regulations based on the classification of diesel particulate matter as a "toxic air contaminant."³

Perturbed that these potentially costly compliance regulations were out of touch with what he viewed as the real risks of fine particulate matter, Enstrom became increasingly outspoken with his criticisms, including offering testimony at a California State Senate Rules Committee meeting in comments that were released publicly.

Criticism and Concern

Here seems as good a place as any to reveal my own role in what happened next. I'm vice president of programs at the Foundation for Individual Rights in

¹James Enstrom, "Fine Particulate Air Pollution and Total Mortality among Elderly Californians, 1973–2002," *Inhalation Toxicology* 17, no. 14 (2005): 803–16.

²Ibid., abstract, <http://www.tandfonline.com/doi/abs/10.1080/08958370500240413>.

³Among the SRP's duties is the vetting of CARB proposals to make such designations. It's a kind of seal of approval from the scientific community, as all SRP members are researchers who hold academic posts. Incidentally, while CARB board members are appointed by the state, SRP nominations are made by the president of the University of California system, which indirectly endows the system with significant influence in setting air regulations.

Education (FIRE), a civil liberties nonprofit that defends free speech and academic freedom for university faculty and students across the country on an entirely nonpartisan basis.⁴ FIRE supported Enstrom while he was fighting UCLA for retaliating against him for his controversial position on the real risks of fine particulate matter.

I've worked at FIRE since 2008, and while my years of service have given me knowledge and insight on matters involving free speech and academic freedom, I bring no such expertise, or any specific preconceptions, to the scientific issues debated by Enstrom and his colleagues. More to the point, FIRE takes no position on these issues. Ideally, when experts disagree on core matters pertaining to their field, a rigorous debate ensues in which scientific findings succeed or fail on their own merits.

We can be a bit more direct and substantive, however, on other matters addressed by Enstrom with his criticisms of CARB, which raised significant concerns over irregularities, if not outright malfeasance, by some of its members. For one, Enstrom brought to light the fact that several SRP members had continued to hold their positions far beyond their statutorily required term limits, without the required renomination. (The Pacific Legal Foundation sued California to enforce these limits, and several CARB members would be replaced in 2010 as a result of this exposure.)⁵

More urgently, Enstrom brought to light that Hien T. Tran, a key CARB scientist, had fraudulent credentials, having purchased a Ph.D. for \$1,000 from a diploma mill called "Thornhill University," while claiming to hold a doctoral degree from the University of California, Davis. As Enstrom's eventual lawsuit noted, Tran, with his fraudulent doctorate, was "lead author of the October 24, 2008 CARB Report on PM2.5 and premature death in California," which "served as the primary public health justification for a new diesel vehicle regulatory scheme approved by CARB on December 12, 2008."⁶ (Tran would be demoted as a result of this exposure and ultimately leave CARB.)

⁴See Foundation for Individual Rights in Education, <https://thefire.org>.

⁵Pacific Legal Foundation, <http://pacificlegal.org>. The complaint is available at <http://plf.typepad.com/files/srp-complaint.pdf>.

⁶See "Complaint Filed in U.S. District Court, Central District of California by James Enstrom against University of California, Los Angeles, June 13, 2012," available at Foundation for Individual Rights in Education, 10, <https://d28htnjz2elwuj.cloudfront.net/pdfs/41bead8455fb5b5a0f7415a3b970a8a0.pdf>. An updated (2009) copy of the CARB report in question, *Methodology for Estimating Premature Deaths Associated with Long-Term Exposures to Fine Airborne Particulate Matter in California*, notes that Tran's Ph.D. title "was removed after it was discovered that it was not from an accredited institution," i, <https://www.arb.ca.gov/research/health/pm-mort/pm-mortdraft.pdf>.

Costs

It's without question that the criticisms raised by Enstrom were in the public interest. It's also without question that his willingness to level these criticisms, including against his own colleagues, put a target on Enstrom's back within EHS, and a thousand-cuts pattern of questionable, discriminatory, or retaliatory treatment followed.

In late 2009, for example, Enstrom discovered that, without his knowledge or consent, his salary arrangement had been altered so that his salary was drawn not from the solitary fund designated for this purpose, but from three separate unrestricted funds supporting his research. In addition, Enstrom discovered that the same fund primarily designated for his salary had been charged the higher servicing rate by UCLA for research conducted in on-campus facilities, despite that Enstrom did not keep an on-campus office, and never had. The cumulative effects of these oversights—to give UCLA, charitably, the benefit of the doubt—was to overdraw his salary fund by more than \$100,000, in Enstrom's estimation, and create the appearance that Enstrom's research funding had been depleted.

Like many university-affiliated research scientists, Enstrom's salary was supported by grants and private funding he was responsible for procuring himself. As many such classified researchers don't have the same tenure protections as their departmental colleagues, a loss of funding often puts the writing on the wall in terms of their employment. And indeed, in February 2010 Enstrom's department chair notified him that, due to the so-called depletion of Enstrom's research funds, he would be laid off indefinitely beginning that April. UCLA's School of Public Health (SPH) began steps to remove him despite his repeated protests about serious accounting irregularities in his research funding and his repeated requests (which UCLA never fulfilled) that he be provided a thorough accounting of all of his funds from 2007 to 2009.

UCLA eventually abandoned its attempts to terminate Enstrom on these grounds. That did not stop it from pursuing other lines of attack against him, however, all while refusing to reimburse Enstrom for the funds it had misallocated, essentially forcing him to work without a salary for an extended period. Shortly before Enstrom learned of the accounting irregularities that had depleted his funding, he was informed by an EHS administrator that his reappointment was to be reviewed, and either approved or denied, by the entire EHS faculty. This was more than just highly unusual; indeed, it had never been done before for an EHS faculty member of Enstrom's classification. Apart from the two times that he had been promoted while at SPH, in 1981 and 2000,

Enstrom had only ever been reviewed informally, and his reappointments had always gone forth without incident.

Consequences

While Enstrom was asked to prepare a full research dossier to present to the faculty, actually being able to provide it to them for full and fair consideration of his position was another matter. Enstrom was repeatedly rebuffed by the EHS chair in his attempts to present his research. Notably, the EHS chair denied Enstrom's request to make a special presentation to the faculty, telling him that a brief presentation criticizing CARB research which he had delivered at a February 2010 CARB meeting would suffice, even as the chair himself had criticized the presentation in an e-mail to numerous EHS faculty.

On June 9, 2010, UCLA informed Enstrom that he would be terminated effective June 30, justifying its decision in part by stating, "Programmatically, your research is not aligned with the academic mission of the Department, and your research...does not meet the minimum requirements of the Department."⁷ This was later extended to August 30—to terminate him as initially planned would have, among other things, violated Enstrom's due process right to be informed of his termination a minimum of sixty days in advance. While UCLA gave this grace period, it also officially switched him from a "100 Percent Time" employee to a "0 Percent Time" employee, effectively forbidding him from drawing any salary. (Enstrom's termination date would eventually be extended, *without pay*, all the way to June 30, 2012.)

Claims and Charges

The claim that Enstrom's research somehow did not align with the mission of the department was, of course, a ridiculous lie. EHS's own mission, for one, cited "studies on children's exposure to particulates from diesel buses" as among the "extremely interdisciplinary"⁸ research being conducted there, and the department had publicly talked up its role as "a leader in the health effects of air pollution and vehicular emissions."⁹ No

⁷"Letter from Richard Jackson to James Enstrom, June 9, 2010," Foundation for Individual Rights in Education, <https://www.thefire.org/letter-from-richard-jackson-to-james-enstrom-june-9-2010/>.

⁸"Complaint Filed in U.S. District Court," 23.

⁹*UCLA: Department of Environmental Health Sciences Self-Review Report* (Los Angeles: Department of Environmental Health Sciences, University of California, 2010), 13. <http://www.scientificintegrityinstitute.org/ehs012910.pdf>.

surprise, then, that the dean in charge of hearing Enstrom's grievance against his termination found that "Dr. Enstrom's research is fully aligned with the department's mission" and that "[b]y its very name, [EHS] embraces the research foci of Dr. Enstrom, i.e., determining the effect of diesel exhaust fine particulate matter on overall mortality in California."¹⁰

The charge that Enstrom somehow hadn't met department minimums was largely bogus as well. At no time in his tenure at UCLA had he ever been presented an outline of these supposed minimums, nor had he ever been warned that he might be failing to meet them. The only evidence EHS could produce to back up this charge was a 1995 document setting forth publication requirements for tenure and tenure-track faculty, but not untenured research faculty of Enstrom's classification. At no time did EHS provide him a copy of this document.

Despite the blatant transparency of the pretexts used to try and remove Enstrom, UCLA's decision to terminate him was not itself rejected. All the more significantly, his termination was upheld without UCLA ever reckoning with the First Amendment and academic freedom issues inherent in his case. Indeed, at multiple junctures, UCLA explicitly refused to do so, even when a statement of "unanimous concern" from the UCLA Academic Senate Committee on Academic Freedom urged them otherwise.¹¹

Recourse and Compensation

Enstrom filed suit against the University of California regents, UCLA Chancellor Gene Block, and numerous university and departmental officials connected to his case on June 12, 2012, shortly before his employment at UCLA was officially set to terminate. Litigation moving at the pace it tends to trod, Enstrom and the university did not reach settlement until March 2015, and then only after a federal district court judge refused to dismiss Enstrom's First Amendment claims against his former institution and a lengthy discovery process ensued. In the end, UCLA appears to have been no more eager to consider Enstrom's First Amendment claims than it was to have a judge do it for them.

In addition to the \$140,000 settlement Enstrom received, he was allowed classification as a "Retired Researcher," with continued access to the resources he'd previously enjoyed. In all, the terms of the settlement were highly favorable to Enstrom, though that \$140,000 award is considerably small when considering it had been nearly five years since he had drawn a salary from UCLA.

¹⁰Complaint Filed in U.S. District Court," 24.

¹¹Ibid., 27, exhibit 19 submitted with complaint.

Ongoing Challenges and Concerns

Since the settlement of Enstrom's case, campus free speech and academic freedom have transitioned from niche issues into matters of mainstream national concern. The *Washington Post*, the *New York Times*, and other major media outlets regularly turn their attention to the campus climate, often in the form of one "What's Going On?" headline after another. Especially after the 2016 presidential election, many have looked to the campus as a kind of ground zero for the cultural battles that have riven American politics.

Unfortunately, the "outrage machine" that has hijacked campus discourse in recent years shows no sign of releasing its grip. Recent months have seen shocking and violent protests at Berkeley and Middlebury, where speakers were forcibly prevented from addressing the campus, with destruction of property and personal injury thrown in for bad measure. (The very worst of these atrocities, it should be said, seem largely to have been the work of non-campus individuals.) At Evergreen State College in Washington state, students and activists demanded that biology professor Bret Weinstein be ridden out of town on a rail for his objections to the message of a campus-wide "Day of Absence" that encouraged white students and faculty to leave the campus for a day. And then there are those professors who have been subjected to vicious harassment campaigns on social media in response to their personal posts—in some cases vicious enough to temporarily shut down the operations of their institutions for public safety concerns.

As a public good, and as a cultural value worthy of preservation, academic freedom faces challenges from multiple corners—from skeptical commentators and pundits, from enterprising politicians, from students increasingly demanding that their institutions be responsive to their concerns, and from administrators too unwilling to stand up for academic values in the face of such demands. Some have thoughtfully argued that strong academic freedom protections have had the effect of entrenching left-liberal orthodoxy on campus at the cost of meaningful viewpoint diversity, and that academic freedom has been devalued as a result. Others see sensationalized stories of professors run amok and question the relevance academic freedom has in the real world and why faculty are to be accorded such special status when those outside the academy have no such security.

This examination of Enstrom's case can help ground the debate by showing the very real-world stakes it has had not just for people within his enclave, but for the wider public as well. Our jurisprudence of freedom of speech has shaped itself by repeatedly recognizing the rights not of those with the most popular ideas, but those

whose ideas arouse the most passionate opposition. Academic freedom, recognized by the Supreme Court in *Keyishian v. Board of Regents* as “a special concern of the First Amendment,” should function similarly.¹² Academic freedom is not perfect, and universities do not always defend it as they should (UCLA notably failed to do so in Enstrom’s case), but at its best it serves to protect the rights of that vocal minority, like Enstrom, who feel duty-bound to buck the consensus of their colleagues in the name of pursuing what they view as good science.

Academic freedom is far more than some chestnut to be trotted out in defense of professors who teach ethnic studies by day and light up Twitter with denunciations of white privilege and the National Rifle Association by night. Given the potential for the fruits of academic science of today to be reflected in the costly regulatory policies of tomorrow, it is especially in our interest that academic freedom remains strong.

There is another reason academic freedom must remain strong: no field is incorruptible, and all of them need, occasionally, to be protected from their own worst instincts. Academic science, too, is susceptible to the currents of politics, and not always in ways that serve the pursuit of scientific truth. Money, whether received through government grants or private industry partnerships, has its own potential to distort priorities and warp the terms of scientific discussion and research. The mere desire to maintain professional influence once it has been attained, and to keep out viewpoints and research that could threaten that influence, can become a beast all its own.

Scientific consensus, the kind that Enstrom’s research challenged, does not confer a monopoly on rightness, or the right to perpetual influence. There is plenty of room in our model of higher education for professors such as James Enstrom to challenge the consensus, be they right or wrong in their conclusions, and have the consensus adjusted accordingly—or left in place. The right to challenge consensus, and also to shed light on wrongdoing, lies at the heart of academic freedom. Many of these debates will take place out of public sight, and most of them will not directly or even indirectly affect our lives. Some of them, however, will. Indeed, they can affect the very air we breathe.

¹²*Keyishian v. Board of Regents*, 385 U.S. 589 (1967). See <https://www.thefire.org/first-amendment-library/decision/keyishian-et-al-v-board-of-regents-of-the-university-of-the-state-of-new-york-et-al/>.

Criticism of EPA-452/P-19-001 September 2019 Policy Assessment for the Review of the National Ambient Air Quality Standards for Particulate Matter, External Review Draft

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I am herewith submitting to the EPA Clean Air Scientific Advisory Committee (CASAC) detailed criticism of EPA-452/P-19-001 [EPA Policy Assessment for the Review of the National Ambient Air Quality Standards for Particulate Matter \(External Review Draft - September 2019\)](#) (2019 PM PA). The 2019 PM PA is severely flawed because it does not address the concerns of the April 11, 2019 [CASAC Review of the EPA's Integrated Science Assessment for Particulate Matter \(External Review Draft – October 2018\)](#) (Cox 2019) regarding EPA/600/R-18/179 [US EPA Integrated Science Assessment \(ISA\) for Particulate Matter \(External Review Draft\) October 2018](#) (2018 PM ISA). To illustrate the severe flaws in 2019 PM PA, I focus on the “All-cause mortality” portion of Figure 3-3 within Section 3.2.3 PM2.5 Concentrations in Key Studies Reporting Health Effects of Chapter 3 REVIEW OF THE PRIMARY STANDARDS FOR PM2.5 of the 2019 PM PA. A key sentence on page 3-52 states “To evaluate the PM2.5 air quality distributions in key studies in this review, we first identify the epidemiologic studies assessed in the draft ISA that have the potential to be most informative in reaching conclusions on the primary PM2.5 standards.” Unfortunately, Figure 3-3 on page 3-54 does not properly describe the results from the nine US prospective cohort studies of PM2.5 and total mortality. As I document below, the answer is NO to the question in the title of this essential 2017 article: [“Do causal concentration–response functions exist? A critical review of associational and causal relations between fine particulate matter and mortality”](#) in *Critical Reviews in Toxicology* by CASAC Chair Louis Anthony (Tony) Cox Jr (Cox 2017). My criticism is divided into the five sections below.

1. 2019 PM PA Obscures the Null Relationship Between PM2.5 and Total Mortality in the US

Figure 3-3 of 2019 PM PA deliberately misrepresents the US epidemiologic evidence on the relationship of PM2.5 to total (all cause) mortality and obscures the null relationship that exists in a proper meta-analysis of the nine major US cohort studies with published findings. Particularly troubling to me is the unjustified omission from the 2019 PM PA of my March 28, 2017 [“Fine Particulate Matter and Total Mortality in Cancer Prevention Study Reanalysis”](#) in *Dose-Response* (Enstrom 2017) and my May 29, 2018 [“Response to Criticism”](#) in *Dose-Response* (Enstrom 2018). My seminal reanalysis of ACS CPS II identified major flaws in [Pope 1995](#), the key study underlying the 1997 PM NAAQS. Instead of properly examining the detailed findings in my reanalysis, SECTION 11.2: Long-Term PM2.5 Exposure and Total Mortality of the 2018 PM ISA dismissed my reanalysis in two *inaccurate* sentences: “A recent reanalysis of early ACS results observed a null association between county-level averages of PM2.5 measured by the Inhalable Particle Network between 1979 and 1983 and deaths between 1982 and 1988 (HR: 1.01; 95% CI: 1.00, 1.02) (Enstrom, 2017). Inconsistencies in the results could be due to the use of 85 counties in the ACS analysis by Enstrom (2017) and 50 Metropolitan Statistical Areas in the original ACS analysis (Pope et al., 1995).”

A proper meta-analysis of the relationship between PM2.5 and total mortality in nine US cohort studies is given in the September 28, 2018 Intrepid Insight (II) article "[Statistical Review of Competing Findings in Fine Particulate Matter and Total Mortality Studies](#)".

II Table B3: Intrepid Insight Computation of Fixed and Random Effects Meta-Analysis Nine US Cohorts That Analyzed Ambient Fine Particulate Matter (PM2.5) and Total (All-cause) Mortality Relative Risk (RR and 95% CI) of Total Mortality Associated with Increase of 10 µg/m³ in PM2.5

US Cohort Studies	Author	Year	RR Table	F-U Years	RR	95%CI(L)	95%CI(U)
Veterans Study	Lipfert	2000	T6	1986-1996	0.890	0.850	0.950
Medicare (MCAPS) Eastern US	Zeger	2008	T3	2000-2005	1.068	1.049	1.087
Medicare (MCAPS) Central US	Zeger	2008	T3	2000-2005	1.132	1.095	1.169
Medicare (MCAPS) Western US	Zeger	2008	T3	2000-2005	0.989	0.970	1.008
ACS Cancer Prevention Study (CPS II)	HEI RR140	2009	T34	1982-2000	1.028	1.014	1.043
Nurses Health Study	Puett	2009	T3	1992-2002	1.260	1.020	1.540
Health Professionals FU Study	Puett	2011	T2	1989-2002	0.860	0.720	1.020
Harvard Six Cities Study (H6CS)	Lepeule	2012	T2	1974-2009	1.140	1.070	1.220
Agricultural Health Study	Weichenthal	2015	T2	1993-2009	0.950	0.760	1.200
NIH-AAPR Diet and Health Study	Thurston	2016	T2 F3	2000-2009	1.025	1.000	1.049
National Health Interview Survey	Parker	2018	T3corr	1997-2011	1.016	0.979	1.054
Intrepid Insight Random Effects Meta-Analysis Summary RR					1.031	0.997	1.066

Q Test Statistic = 109.5100704 I² 90.87%

Cochrane's Q Test for Homogeneity of Studies (Null Hypothesis: Studies are Homogenous)

P-Value = 6.69843E-19 → Since Studies fail Test for Homogeneity, Random Effects Meta-Analysis Yields Summary RR = 1.031 (0.997-1.066), which is statistically consistent with 1.000 (NO relationship)

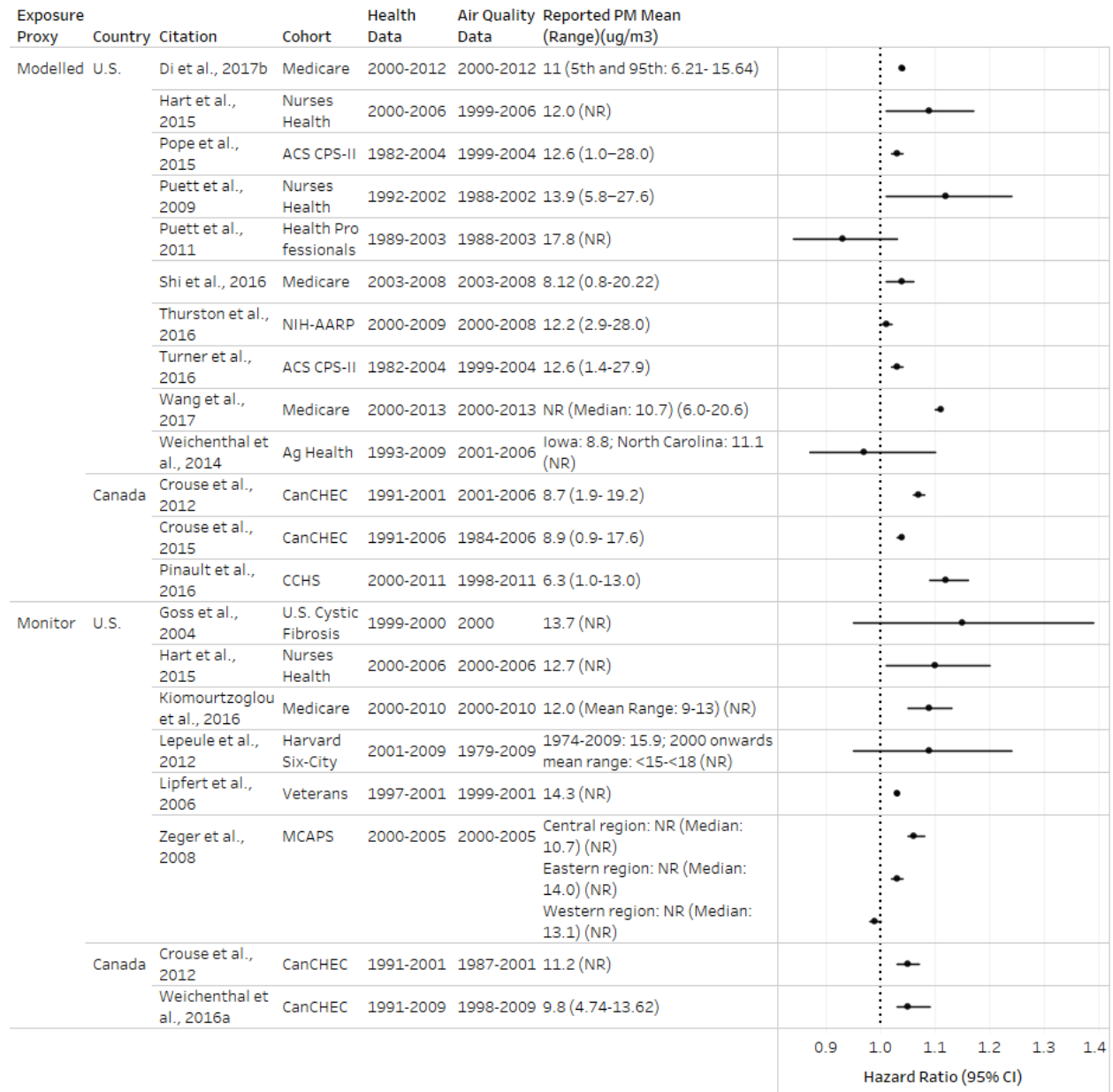
The original Zeger 2008 analysis of the Medicare cohort (MCAPS) was included in this meta-analysis rather than the Di 2017 analysis, because of the serious concerns about Di 2017 that I stated in my [October 12, 2017 NEJM letter](#). Dominici, the key author on both studies, does not explain how the overall RR increased from 1.044 in the Zeger 2008 analysis to 1.073 in the Di 2017 analysis. Di 2017 does not even cite Zeger 2008. If the Medicare cohort is removed from the meta-analysis because it does not properly control for confounders, II Table B4 shows that the Summary RR = 1.014 (0.973-1.057), which is also NO relationship.

Contrary to the evidence in the detailed II Table B3, the 2019 PM PA Figure 3-3 misrepresents the US evidence and inappropriately includes Canadian evidence. For instance, Figure 3-3 omits the null findings in the original Veterans Study (Lipfert 2000), as shown in II Table B3. In addition, Figure 3-3 includes results from the CPS II cohort twice (Pope 2015 and Turner 2016) and does not mention that my reanalysis found serious flaws in Pope 1995, HEI 2000, and HEI 2009. These flaws raise doubts about the validity of subsequent 'secret science' CPS II analyses by Pope and Turner. Figure 3-3 includes results from the Medicare cohort five times (Di 2017, Shi 2016, Wang 2017, Kiomourtzoglou 2016, Zeger 2008). There is no mention that the original Medicare study (Zeger 2008) is not consistent with the recent study (Di 2017). Figure 3-3 includes results from the Nurses Health Study twice (Puett 2009 and Hart 2015) and there is no mention that Puett 2009 and Puett 2011 omitted California subjects, who most likely had null findings. Inclusion of multiple hazard ratio (RR) results from the same cohort is inappropriate and gives the misleading impression that the RRs in most of the US cohorts are positive.

Inclusion in Figure 3-3 of results from Canadian studies is totally inappropriate because these positive Canadian RRs are not relevant to PM2.5 findings and policy assessment in the US. To show how the 2019 PM PA presented these results, Figure 3-3 on page 3-54 of the 2019 PM PA is reproduced below.

2019 PM PA Figure 3-3. Epidemiologic studies examining associations between long-term PM2.5 exposures and [all-cause] mortality.

All-cause mortality



2. 2019 PM PA Cites ‘Positive Authors’ and Omits ‘Null Authors’ and Their Criticism

Based on my extensive PM2.5 epidemiologic research and related knowledge since February 2002, I have strong evidence that the 2019 PM PA almost exclusively cites the research of ‘positive authors,’ investigators who publish positive relationships emphasizing the adverse health effects of PM2.5, and omits the ‘null authors,’ investigators who publish evidence of no health effects of PM2.5 and criticism of the adverse health effects findings. Prime evidence of this bias is my above critique of Figure 3-3 and the failure of the 2019 PM PA to address the serious issues raised in Cox 2017 and Cox 2019. In addition, the evidence of extreme bias toward ‘positive authors’ extends to the EPA 452/R-11-003 [April 2011 Policy Assessment for the Review of the Particulate Matter National Ambient Air Quality Standards](#) (2011 PM PA) and the annual publication of the American Lung Association “State of the Air” (ALA SOTA) (<https://www.lung.org/our-initiatives/healthy-air/sota/>). To document the magnitude of this bias, I tabulated the first author names of the publications cited in the 2019 PM PA, the 2011 PM PA, the 2019 ALA SOTA, and the 2011 ALA SOTA.

Table 1 shows the 2019 PM PA citations of 45 ‘positive authors’ separated into: Group 1) 21 authors associated with the Harvard TH Chan School of Public Health (HTHCSPH) and/or other northeastern universities; Group 2) 10 Canadian authors; and Group 3) 14 authors associated with the American Cancer Society or California universities. Group 1 authors are cited 291 times, Group 2 authors are cited 277 times, and Group 3 authors are cited 142 times. This is a grand total of 710 citations of ‘positive authors.’

Table 2 shows the 2019 PM PA citations of 50 authors who have published null findings and/or criticisms of the relationship between air pollution (particularly PM2.5) and mortality. These ‘null authors’ include CASAC members, CASAC consultants, four doctors representing 112 German pulmonary physicians (<https://www.dw.com/en/nitrogen-oxide-is-it-really-that-dangerous-lung-doctors-ask/a-47202076>), myself, and many other distinguished MDs and PhDs dating back more than 30 years. The 2019 PM PA cited these 50 ‘null authors’ a grand total of 10 times: 9 citations were to Cox 2019 and 1 citation was to Lipfert 2006. There were NO citations to 48 ‘null authors.’

Table 3 shows that 2019 PM PA cited the 7 CASAC members 9 times and cited the 12 CASAC consultants 8 times. All 9 of the CASAC member citations refer to the April 11, 2019 CASAC Review of the 2018 PM ISA submitted to EPA by Chair Tony Cox (Cox 2019).

In summary, the 2019 PM PA contained 710 ‘positive author’ and 10 ‘null author’ citations. The 2011 PM PA contained 529 ‘positive author’ citations and 8 ‘null author’ citations. The 2019 ALA SOTA contained 217 ‘positive author’ citations and 0 ‘null author’ citations. The 2011 ALA SOTA contained 165 ‘positive author’ citations and 0 ‘null author’ citations. In other words, both the EPA PM PA and the ALA SOTA are extremely biased toward ‘positive author’ findings and against ‘null author’ findings. Furthermore, the 2019 PM PA citation results in Table 1 reveal a dramatic increase since the 2011 PM PA in the citation of Group 2 Canadian authors and their Canadian studies. This shift toward Canadian authors and Canadian evidence is totally inappropriate because the 2019 PM PA is supposed to use the particulate matter evidence in the US as the basis for policy assessment in the US!

Table 1. 'Positive Author' Citations in 2011 & 2019 EPA PM Policy Assessment and 2011 & 2019 ALA State of the Air October 17, 2019

'Positive Authors' Who Publish and/or Promote Positive PM2.5 Death Findings				EPA PM PA	EPA PM PA	ALA SOTA	ALA SOTA
First Name	Last Name	Institution (HTHCSPH training shown)	State	2019	2011	2019	2011
Group 1) Harvard TH Chan School of Public Health & Other NE Investigators							
Michelle L	Bell	Yale U (2002 PhD Enviro Eng JHU)	CT	25	39	7	5
Robert D	Brook	University of Michigan	MI	12	0	0	1
Patricia F	Coogan	Boston University	MA	4	0	0	0
Douglas W	Dockery	HTHCSPH (1979 ScD Env Health at HTHCSPH)	MA	7	20	8	8
Francine	Dominici	JHBSPH-->HTHCSPH	MA	27	29	12	6
Jaime E	Hart	HTHCSPH (2008 ScD Env Health at HTHCSPH)	MA	9	0	0	5
Francine	Laden	HTHCSPH (1998 ScD Env Health at HTHCSPH)	MA	14	18	5	6
Joanne	Lepeule	HTHCSPH	MA	14	0	3	0
Morton	Lippmann	NYU	NY	6	2	1	1
Marianthi-Anna	Kioumourtzoglou,	Columbia MSPH (2013 ScD Env Health Sci HTHCSPH)	NY	8	0	1	0
Murray A	Mittleman	HTHCSPH (1994 DrPH HTHCSPH)	MA	4	2	4	5
C Arden	Pope III	BYU (1992-1993 IPH Env Health at HTHCSPH)	UT	20	27	11	13
Robin C	Puett	University of Maryland SPH	MD	12	0	1	1
Zev	Ross	ZevRoss Spacial Analysis	NY	6	0	0	0
Jonathan M	Samet	JHBSPH->USC DPM->CO SPH (1977 MS Epi HTHCSPH)	CO	28	88	9	5
Joel D	Schwartz	US EPA-->HTHCSPH	MA	40	70	37	21
Frank E	Speizer	HTHCSPH	MA	3	3	3	3
Helen H	Suh	HTHCSPH-->Tufts U (1993 ScD Env Health HTHCSPH)	MA	5	3	2	1
George D	Thurston	NYU (1983 ScD Env Health Sci HTHCSPH)	NY	16	9	6	5
Annette	Zanobetti	HTHCSPH	MA	24	51	18	10
Scott L	Zeger	JHBSPH	MD	7	15	4	4
Total Citations				291	376	132	100
Group 2) Canadian Investigators							
Jeffrey R	Brook	University of Toronto DLSPH	CN	13	5	1	1
Richard T	Burnett	Health Canada, Ottawa	CN	38	33	7	5
Daniel L	Crouse	University of New Brunswick, Fredericton	CN	20	0	0	0
Daniel	Krewski	University of Ottawa	CN	19	34	6	4
Randall V	Martin	Dalhousie University, Halifax	CN	33	0	0	0
Lauren	Pinault	Statistics Canada, Ottawa	CN	16	0	0	0
Michelle L	Turner	University of Ottawa	CN	33	1	2	0
Aaron	van Donkelaar	Dalhousie University, Halifax	CN	56	0	0	0
Paul J	Villeneuve	University of Toronto SPH	CN	14	10	2	1
Scott	Weichenthal	Health Canada, Ottawa	CN	35	0	0	0
Total Citations				277	83	18	11
Group 3) American Cancer Society and California Investigators							
W Ryan	Diver	ACS National	GA	13	0	1	0
Susan M	Gapstur	ACS National	GA	14	0	1	0
Michael J	Thun	ACS National (1983 MS Epi HTHCSPH)	GA	4	5	5	4
Edward L	Avol	USC DPM	CA	7	6	7	6
Bernard S	Beckerman	UC Berkeley SPH	CA	10	0	0	0
Kiros T	Berhane	USC DPM	CA	6	5	6	4
W James	Gauderman	USC DPM	CA	9	11	9	6
Frank D	Gilliland	USC DPM	CA	8	5	7	5
Michael	Jerrett	CN-->USC DPM-->UCB SPH-->UCLA SPH	CA	52	5	8	6
Rob S	McConnell	USC DPM	CA	7	9	7	5
John M	Peters	USC DPM	CA	3	11	5	7
Edward B	Rappaport	USC DPM	CA	4	4	3	3
Duncan C	Thomas	USC DPM	CA	1	5	4	4
Hita	Vora	USC DPM	CA	4	4	4	4
Total Citations				142	70	67	54
Grand Total Citations				710	529	217	165

Table 2. 'Null Author' Citations in 2011 & 2019 EPA PM Policy Assessment and 2011 & 2019 ALA State of the Air October 17, 2019

'Null Authors' Who Publish Null AP Findings and/or Criticize Postive AP Findings			EPA PM PA		ALA SOTA		
First Name	Last Name	Institution	State	2019	2011	2019	2011
Published Critics of Air Pollution (including PM2.5) Causing Deaths							
Jerome C	Arnett	Pulmonologist & CEI Retired	WV	0	0	0	0
Daren	Bakst	Heritage Foundation & PM2.5 Working Group	DC	0	0	0	0
Lester	Breslow	CA Dept Public Health & UCLA SPH	CA	0	0	0	0
W Matt	Briggs	wmbriggs.com & Cornell U	NY	0	0	0	0
William B	Bunn	Navistar International & U So Car	SC	0	0	0	0
Edward J	Calabrese	U Massachuets Amherst	MA	0	0	0	0
Alan	Carlin	EPA Retired	VA	0	0	0	0
L Anthony	Cox	Cox Associates & U Colorado Denver	CO	9	0	0	0
John D	Dunn	Darnall Army Medical Center	TX	0	0	0	0
Myron	Ebell	Competitive Enterprise Institute	DC	0	0	0	0
James E	Enstrom	UCLA Retired & Scientific Integrity Institute	CA	0	0	0	0
Gordon J	Fulks	Gordon Fulks and Associates & CO2 Coalition	OR	0	0	0	0
Michael	Fumento	AEI & Hudson & 'Polluted Science' Author	DC	0	0	0	0
John F	Gamble	Exxon Retired	NJ	0	0	0	0
Lawrence	Garfinkel	ACS National	NY	0	0	0	0
Julie E	Goodman	Gradient	MA	0	0	0	0
E Cuyler	Hammond	ACS National	NY	0	0	0	0
Martin	Hetzel	Represents 112 German Lung Specialists	GER	0	0	0	0
Thomas W	Hesterberg	Navistar International & CTEH	IL	0	0	0	0
Jon M	Heuss	Air Improvement Resource	MI	0	0	0	0
John L	Hoare	AIR, Inc	NZ	0	0	0	0
Walter W	Holland	St Thomas's Hospital Medical School, London	UK	0	0	0	0
Michael	Hunnicuttt	Texas Commission on Environmental Quality	TX	0	0	0	0
Geoffrey C	Kabat	Einstein CoM Retired & geoffreykabat.com	NY	0	0	0	0
Matthias	Klingner	Represents 112 German Lung Specialists	GER	0	0	0	0
Thomas	Koch	Represents 112 German Lung Specialists	GER	0	0	0	0
Dieter	Köhler	Represents 112 German Lung Specialists--Leader	GER	0	0	0	0
Gary	Koop	U Leicester	UK	0	0	0	0
Goran	Krstic	Fraser Health	CN	0	0	0	0
Sabine S	Lange	Texas Commission on Environmental Quality	TX	0	0	0	0
Marlo	Lewis	Competitive Enterprise Institute	DC	0	0	0	0
Frederick W	Lipfert	Brookhaven Nat Lab Retired & Consultant	NY	1	8	0	0
Joseph L	Lyon	U Utah	UT	0	0	0	0
Roger O	McClellan	Toxicology Expert & Consultant	NM	0	0	0	0
Henry I	Miller	Hoover Institution & Pacific Research Inst	CA	0	0	0	0
Steven J	Milloy	JunkScience.com & 'Scare Pollution' Author	MD	0	0	0	0
A Alan	Moghissi	George Mason U & Institute Reg Sci	VA	0	0	0	0
Suresh	Moolgavkar	U Washington & Exponent	WA	0	0	0	0
Daniel L	Nebert	U Cinninati Retired	OH	0	0	0	0
Mikko	Paunio	U Helsinki	FIN	0	0	0	0
Douglas A	Popken	Cox Associates & U Colorado Denver	CO	0	0	0	0
Robert F	Phalen	UC Irvine	CA	0	0	0	0
Anne E	Smith	National Economic Research Associates	DC	0	0	0	0
Richard L	Smith	U North Carolina	NC	0	0	0	0
Anthony V	Swan	Public Health Laboratory, London	UK	0	0	0	0
Lise	Tole	U Leicester	UK	0	0	0	0
Robert E	Waller	Department of Health, London	UK	0	0	0	0
George T	Wolff	Air Improvement Resource	MI	0	0	0	0
Ronald E	Wyzga	Electric Power Research Institute	CA	0	0	0	0
S Stanley	Young	NISS Retired & CGStat	NC	0	0	0	0
Grand Total Citations				10	8	0	0

Table 3. CASAC Member & Consultant Citations in 2011 & 2019 EPA PM Policy Assessment and 2011 & 2019 ALA State of the Air October 17, 2019

EPA CASAC Members and EPA CASAC Consultants Cited					EPA PM PA		ALA SOTA	
First Name	Last Name	Institution	State	2019	2011	2019	2011	
EPA CASAC Members 2019								
L Anthony	Cox	Chair Cox Associates & U Colorado Denver *	CO	9	0	0	0	
James	Boylan	Georgia Department of Natural Resources	GA	0	0	0	0	
Mark W	Frampton	U Rochester Medical Center	NY	0	0	0	0	
Ronald J	Kendall	Texas Tech University	TX	0	0	0	0	
Sabine	Lange	Texas Commission on Environmental Quality	TX	0	0	0	0	
Corey M	Masuca	Jefferson County Department of Health	AL	0	0	0	0	
Steven C	Packham	Utah Department of Environmental Quality	UT	0	0	0	0	
Total Citations				9	0	0	0	

* All 9 citations refer to April 11, 2019 CASAC Review of the 2018 PM ISA submitted to EPA by Chair Tony Cox (Cox 2019)

EPA CASAC Consultants for PM Policy Assessment October 2019							
Constantin	Aliferis	U Minnesota	MN	0	0	0	0
Brent	Auverman	Texas A&M U	TX	0	0	0	0
Dan A	Jaffe	U Washington-Bothell	WA	6	1	0	0
John J	Jansen	Southern Company Services, Inc.	AL	0	0	0	0
Kristen	Johnson	Washington State U	WA	0	0	0	0
Frederick W	Lipfert	Brookhaven Lab & Enviro Consultant	NY	1	8	0	0
Joseph L	Lyon	U Utah	UT	0	0	0	0
D Warner	North	NorthWorks & Stanford U	CA	0	0	0	0
David D	Parrish	NOAA & Consultant	CO	0	0	0	0
Lorenz	Rhomberg	Gradient	MA	0	0	0	0
Sonja	Sax	Ramboll	MA	0	0	0	0
Duncan C	Thomas	U Southern California	CA	1	5	4	4
Total Citations				8	14	4	4

3. 2019 PM PA Authors Must Acknowledge and Address the PM2.5 Deaths Controversy

A very troubling aspect of the 2019 PM PA is the fact that the EPA Office of Air Quality Planning and Standards (OAQPS) authors refuse to acknowledge or address the intense scientific controversy that surrounded the establishment of the 1997 PM2.5 NAAQS and that continues unabated to this day. Since the specific authorship of the 2019 PM PA is not stated anywhere in the 457-page document, I requested the authorship information from the listed contact person, Dr. Scott Jenkins. Since he did not rapidly respond to my request, I looked up the 2011 PM PA ACKNOWLEDGMENTS, which state in part “This Policy Assessment is the product of the Office of Air Quality Planning and Standards (OAQPS). It has been developed as part of the Environmental Protection Agency’s (EPA) ongoing review of the national ambient air quality standards (NAAQS) for particulate matter (PM). The PM NAAQS review team has been led by Ms. Beth Hassett-Sipple. Dr. Karen Martin has managed the project. For the chapter on health effects associated with fine particle exposures and the primary PM2.5 standards, the principal authors include Ms. Beth Hassett-Sipple, Dr. Pradeep Rajan, and Dr. Zach Pekar. . . .”

Then I asked Dr. Zachary Pekar to provide me with the overall authorship information and state his specific role in writing 2019 PM PA Chapter 3 REVIEW OF THE PRIMARY STANDARDS FOR PM2.5. Since Dr. Pekar has not responded to me, I assume that he played a major role in writing Chapter 3, as he did in the 2011 PM PA “chapter on health effects associated with fine particle exposures and the primary PM2.5 standards.” It is important for CASAC members to know that Dr. Pekar was a lead EPA representative at the February 26, 2010 CARB Symposium “[Estimating Premature Deaths from Long-term Exposure to PM2.5.](#)” During 2008 and 2009 I was instrumental in providing the scientific impetus for this CARB Symposium, which is still fully documented on the CARB website. The CARB Symposium weblink includes the Agenda, the Panel, the individual PowerPoint presentations, the entire nine-hour webcast, the entire transcript, and an August 31, 2010 HEI follow-up analysis of the California ACS CPS II cohort data. The supporters of CARB position on PM2.5 premature deaths were Drs. Michael Jerrett, Daniel Krewski, Michael Lipsett, Melanie Marty, Suzanne Paulson, Arden Pope, Jonathan Samet, and George Thurston, as well as Zachary Pekar and Mary Ross of US EPA, and Daniel S. Greenbaum and Aaron Cohen of the Health Effects Institute (HEI). The critics of the CARB position were Drs. Thomas Hesterberg, Frederick Lipfert, Roger McClellan, Suresh Moolgavkar, Robert Phalen, and me.

Thus, Dr. Pekar was a first-hand witness to the intense ongoing PM2.5 deaths controversy almost ten years ago and since then he has been a primary author of PM2.5 health effects for the 2011 PM PA and the 2019 PM PA. Both of these policy assessments seriously misrepresent the research record and grossly exaggerate the adverse health effects of PM2.5 in the US. The misrepresentation is worse now because the 2019 PM PA does not even acknowledge the existence of or the importance of the proposed April 30, 2018 EPA Transparency Rule “[Strengthening Transparency in Regulatory Science.](#)” Dr. Pekar and the other PM PA authors uncritically accept the validity of the ‘positive author’ findings and ignore the ‘null author’ findings. They do not demonstrate understanding of the scientific method and the importance of transparency and reproducibility in scientific assessment of PM2.5 health effects. The CASAC members and the CASAC consultants must assess whether the evidence I have presented above represents falsification by OAQPS of the research record on PM2.5 deaths in the US.

4. Enstrom Analyses of Data for Four Key US Cohorts Support the Need for EPA Transparency Rule

I provide strong support for use of the EPA Transparency Rule in finalizing the 2019 PM PA. I summarize below the four major cohorts for which I possess underlying data that is relevant to the PM2.5 NAAQS and the current Policy Assessment. The data that I possess has been kept strictly confidential and the identity of all subjects has been protected. My analyses of all four cohorts show NO relationship between PM2.5 and total mortality. NONE of the findings that I have published on three of these cohorts is cited in the 2019 PM PA.

A. 118,000 California Subjects in 1959 ACS CPS I (CA CPS I) Cohort with 1960-2002 Deaths

Since 1991 I have possessed the fully identified data for the 118,000 California subjects in the 1959 ACS Cancer Prevention Study (CA CPS I) cohort. With ACS approval, I have actively and passively followed these subjects from 1960 to 2002. My December 15, 2005 *Inhalation Toxicology* article "[Fine particulate air pollution and total mortality among elderly Californians, 1973-2002](#)" found NO relationship between PM2.5 and total mortality in the CA CPS I cohort from 1973 to 2002. A February 18, 2004 unpublished analysis "[Particulate Air Pollution and Mortality in 118,000 Californians, 1960-98](#)" by Dr. Frederick Lipfert and me found NO relationship between PM2.5 and total mortality in the CA CPS I cohort from 1960 to 1998. For instance, Table 3 shows the 10 variable-adjusted RR (95% CI) = 0.985 (0.962-1.009) among 85,978 CA CPS I subjects classified by 1979-1983 IPN PM2.5 level and followed for 1960-1972 mortality. The value shown refers to the relative risk (RR and 95% CI) of total mortality associated with an increase of 10 $\mu\text{g}/\text{m}^3$ in PM2.5. Table 6 shows the 10 variable-adjusted RR (95% CI) = 0.989 (0.946-1.034) among 105,724 CA CPS I subjects classified by 1961 self-described 'heavy air pollution' exposure (yes versus no) and followed for 1962-1972 mortality.

These null mortality findings in CA CPS I are consistent with the null 1960-1965 lung cancer mortality findings in the March 1980 *Preventive Medicine* article "[General Air Pollution and Cancer in the United States](#)" by Dr. E. Cuyler Hammond and Lawrence Garfinkel. Comparing subjects by level of total suspended particulates (TSP) among those not occupationally exposed: 8 cities with High TSP 130-180 $\mu\text{g}/\text{m}^3$ versus 14 cities with low TSP 35-99 $\mu\text{g}/\text{m}^3$ found RR $\sim 0.89/1.10 = 0.81$ for lung cancer deaths during 1960-1965. Also, the observed lung cancer deaths were not increased in the high pollution California counties of Los Angeles, Orange, and Riverside. Since high air pollution levels during the 1960s were not related to mortality, it is implausible that the current low levels of air pollution are related to mortality.

B. 1,200,000 US subjects in 1982 ACS CPS II Cohort with 1982-1988 Deaths

Since 2016 I have possessed the original de-identified version of the underlying data for the 1,200,000 US subjects in the 1982 ACS Cancer Prevention Study (CPS II) cohort, which ACS followed for mortality from 1982 to 1988. The positive relationship between PM2.5 and total mortality in the CPS II cohort (Pope 1995) provided the primary epidemiologic evidence that was used to establish the 1997 PM2.5 NAAQS. My reanalysis presented in [Enstrom 2017](#) and [Enstrom 2018](#) provides unrefuted evidence that the positive relationship in Pope 1995 is not robust. Specifically, Table 3 of Enstrom 2018 shows substantial variation in the 1982-1988 relative risk (RR and 95% CI) of total mortality associated with PM2.5 defined in two different ways. For CPS II subjects residing in 47 US counties, RR = 1.081 (1.036-1.128) based on the 1979-1983 HEI PM2.5 values used in Pope 1995, but RR = 1.021 (0.984-1.058) based on the 1979-1983 IPN PM2.5 values used in Enstrom 2017 and Enstrom 2018. My reanalysis challenges the validity of the PM2.5 NAAQS and demonstrates the urgent need for the EPA Transparency Rule.

C. 160,000 California Subjects in 1995 NIH-AARP Diet and Health Study Cohort with 2000-2009 Deaths

Since 2012 I have possessed the de-identified public use file for the 160,000 California subjects in the [NIH-AARP Diet and Health Study](#) cohort, including 1995-2010 total mortality follow-up data. In 2011 I applied for full NIH-AARP database, but I was only able to obtain the California subjects because Dr. George Thurston applied for and received the full database in 2009. Dr. Thurston demonstrates the variation in PM2.5 mortality risk based on his own analyses of this cohort. His August 7-11, 2011 IEA World Congress of Epidemiology Abstract P1-355 [LONG-TERM PM2.5 AIR POLLUTION EXPOSURE AND MORTALITY AMONG CALIFORNIA RESIDENTS IN THE NIH-AARP COHORT](#) shows a strongly positive RR = 1.09 (1.05-1.12) for total mortality in California. However, his [2016 EHP article](#) shows the null RR = 1.02 (0.99-1.04) in Table 3 and the null RR = 1.017 (0.990-1.040) in Figure 3. The null 2016 RRs are in good agreement with my null RR = 1.001 (0.949-1.055) for total mortality in California, as shown in Enstrom 2017 Table B1. The NIH-AARP Diet and Health Study is a great example of how to facilitate independent analysis of epidemiologic cohort data without violating subject confidentiality. This is further evidence in support of the EPA Transparency Rule.

D. 8,096 Subjects in the Harvard Six Cities Study with 1989-2009 Deaths

Following the [August 1, 2013 House Science Committee Subpoena](#), I received a fully de-identified version of the 1974 Harvard Six Cities Study (H6CS) cohort data for the subpoenaed [July 2012 EHP article by Lepeule, Laden, Dockery, and Schwartz](#) (Lepeule 2012). This is a SAS data file in the Anderson-Gill format named "[Lepeule2012_data_0713.sas7bdat](#)." Six key variables for ten sample records are:

cityc rstrata ptime ypm2_5 y pm2_5b deadt

The first five records are:

STL	4	1	25.2	25.2	0
STU	4	1	39.5	39.5	0
STL	17	1	25.2	25.2	0
STU	17	1	39.5	39.5	0
STL	20	1	25.2	25.2	0

Last five records are:

TOP	25615	1	9.8	12.3	0
TOP	25620	0.058864	11.2	11.7	1
TOP	25620	1	11.2	11.7	0
TOP	25632	1	10	11.6	0
TOP	25643	0.640657	8.7	12.1	0

The October 11, 2013 [Enstrom Tang Analysis of Lepeule2012_data_0713.sas7bdat](#) was able to exactly reproduce several tables in Lepeule 2012. However, since 1974-1988 death information was omitted from the SAS file, the tables involving deaths could not be fully reproduced. Also, it was not possible to reproduce the findings in the seminal article [Dockery 1993](#). In any case, this de-identified data demonstrates that NO subject confidentiality has been violated, contrary to unjustified claims by opponents of the EPA Transparency Rule. CASAC members should request this H6CS data from the Lepeule 2012 authors and/or EPA in order to confirm the 2013 Enstrom Tang Analysis and to confirm that NO subject confidentiality has been violated in the entire file. This would provide further support for the EPA Transparency Rule. Finally, it is important to realize that the weak relationship between PM2.5 and mortality in the tiny H6CS cohort does not justify the PM2.5 NAAQS. Indeed, Laden 2006 Table 2 and Lepeule 2012 Table 2 show NO relationship between PM2.5 and total deaths since 1990.

5. 2019 PM PA Must be Revised as per CASAC Review and Criticism by Enstrom and Others

In summary, the 2019 PM PA provides no evidence that supports changing the PM2.5 NAAQS. To the contrary, the evidence I have presented in the four sections above support the need to reassess the entire scientific basis for the PM2.5 NAAQS. Since the 2011 PM PA went through three drafts in September 2009, March 2010, and June 2010 before being finalized in April 2011, CASAC should recommend that a similar process be followed for the 2019 PM PA. All criticism of the September 2019 PM PA by the CASAC members and the CASAC consultants, as well as the criticism by me and others, must be addressed in the second draft of the 2019 PM PA.

Despite over 25 years of claims about the adverse health effects of PM2.5, there is still NO established etiologic/biologic mechanism for PM2.5 to cause premature death. The average amount of PM2.5 inhaled by each person in the US is infinitesimal: about 50 micrograms (μg) per day, about 0.02 grams per year, and about 1.5 grams during an 80-year lifespan. All the PM2.5 epidemiologic cohort study results are subject to the ecological fallacy because there are NO direct measurements of actual PM2.5 exposure among the cohort subjects. Also, the cohort study results are subject to uncontrolled confounding variables, such as, co-pollutants. The small positive relative risks ($0 < \text{RR} \leq 1.15$) reported in the US cohort studies do not satisfy the established Hill criteria that are used to establish a causal epidemiologic relationship. Indeed, based on the null evidence I have described above for the CA CPS I, CPS II, NIH AARP, and H6CS cohorts, I believe that all of the results for the US studies, if transparently and objectively analyzed, are consistent with NO relationship between PM2.5 and total mortality. In any case, the objective meta-analysis of the published results for nine major US cohorts in II Table B3 above found a summary RR that is consistent with NO relationship between PM2.5 and total mortality.

To reinforce the above points, please examine three major critiques of the claim that PM2.5 causes premature deaths: the 2016 Steven J. Milloy book "[Scare Pollution: Why and How to Fix the EPA](#)," my July 20, 2019 DDP lecture "[The PM2.5 Deaths Controversy: Combating Pseudoscientists](#)," and the September 18, 2019 William Matt Briggs video "[The Epidemiologist Fallacy Exposed](#)."

The EPA OAQPS authors have a special obligation to increase the transparency, objectivity, and scientific integrity of the 2019 PM PA, especially regarding Chapter 3. They must properly cite the results and criticisms of the 'null authors' and they must not uncritically accept and cite the findings of the 'positive authors.' They must show support for the EPA Transparency Rule by releasing the August 1, 2013 House Science Committee Subpoena H6CS data that they must possess. The CASAC members and CASAC consultants need to examine this H6CS data in order to independently assess the H6CS findings and confirm that this de-identified data does not violate subject confidentiality. If the EPA OAQPS authors will not release this H6CS data, I will release the H6CS data that I possess to the CASAC members. Also, the EPA OAQPS must encourage the ACS investigators to release a de-identified version of the CPS II data that has been used as the basis for the CPS II findings cited in the 2019 PM PA. If the ACS investigators continue to refuse to release this data, then I will work with the CASAC members in a full analysis of the original CPS II data that I used in Enstrom 2017 and Enstrom 2018.

The evidence and criticism above provide a very strong basis for reexamining the entire PM2.5 NAAQS and I strongly encourage the CASAC members and CASAC consultants to undertake this reexamination.

<http://online.wsj.com/article/SB10001424052702303816504577312361540817878.html>

Wall Street Journal Opinion March 31, 2012

Updated March 30, 2012, 7:21 p.m. ET

How California's Colleges Indoctrinate Students

A new report on the UC system documents the plague of politicized classrooms. The problem is national in scope.

By **PETER BERKOWITZ**

The politicization of higher education by activist professors and compliant university administrators deprives students of the opportunity to acquire knowledge and refine their minds. It also erodes the nation's civic cohesion and its ability to preserve the institutions that undergird democracy in America.

So argues "A Crisis of Competence: The Corrupting Effect of Political Activism in the University of California," a new report by the California Association of Scholars, a division of the National Association of Scholars (NAS). The report is addressed to the Regents of the University of California, which has ultimate responsibility for governing the UC system, but the pathologies it diagnoses prevail throughout the country.

The analysis begins from a nonpolitical fact: Numerous studies of both the UC system and of higher education nationwide demonstrate that students who graduate from college are increasingly ignorant of history and literature. They are unfamiliar with the principles of American constitutional government. And they are bereft of the skills necessary to comprehend serious books and effectively marshal evidence and argument in written work.

This decline in the quality of education coincides with a profound transformation of the college curriculum. None of the nine general campuses in the UC system requires students to study the history and institutions of the United States. None requires students to study Western civilization, and on seven of the nine UC campuses, including Berkeley, a survey course in Western civilization is not even offered. In several English departments one can graduate without taking a course in Shakespeare. In many political science departments majors need not take a course in American politics.

Moreover, the evidence suggests that the hollowing of the curriculum stems from too many professors' preference for promoting a partisan political agenda.

National studies by Stanley Rothman in 1999, and by Neil Gross and Solon Simmons in 2007, have shown that universities' leftward tilt has become severe. And a 2005 study by Daniel Klein and Andrew Western in *Academic Questions* (a NAS publication) shows this is certainly true in California. For example, Democrats outnumbered Republicans four to one on University of California, Berkeley, professional school faculties; in the social sciences the ratio was approximately 21 to one.

The same 2005 study revealed that the Berkeley sociology department faculty was home to 17 Democrats and no Republicans. The political science department included 28 Democrats and two Republicans. The English department had 29 Democrats and one Republican; and the history department had 31 Democrats and one Republican.

While political affiliation alone need not carry classroom implications, the overwhelmingly left-leaning faculty openly declare the inculcation of progressive political ideas their pedagogical priority. As "A Crisis of Competence" notes, "a recent study by UCLA's prestigious Higher Education Research Institute found that more faculty now believe that they should teach their students to be agents of social change than believe that it is important to teach them the classics of Western civilization."

Some university programs tout their political presuppositions and objectives openly. The mission statements of the Women's Studies program at UCLA prejudices the issues by declaring that it proceeds from "the perspectives of those whose participation has been traditionally distorted, omitted, neglected, or denied." And the Critical Race Studies program at the UCLA School of law announces that its aim is to "transform racial justice advocacy."

Even the august American Association of University Professors—which in 1915 and 1940 published classic statements explaining that the aim of academic freedom was not to indoctrinate but to equip students to think for themselves—has sided with the politicized professoriate.

In 1915, the AAUP affirmed that in teaching controversial subjects a professor should "set forth justly without suppression or innuendo the divergent opinions of other investigators; he should cause his students to become familiar with the best published expressions of the great historic types of doctrine upon the questions at issue."

However, in recent statements on academic freedom in 2007 and 2011, the AAUP has undermined its almost century-old strictures against proselytizing. Its new position is that restricting professors to the use of relevant materials and obliging them to provide a reasonably comprehensive treatment of the subject represent unworkable requirements because relevance and comprehensiveness can themselves be controversial.

On the boundaries, they can be—like anything else. However, it is wrong to dismiss professors' duty to avoid introducing into classroom discussion opinions extraneous to the subject and to provide a well-rounded treatment of the matter under consideration. That opens the classroom to whatever professors wish to talk about. And in all too many cases what they wish to talk about in the classroom is the need to transform America in a progressive direction. Last year the leadership of AAUP officially endorsed the Occupy Wall Street movement.

Excluding from the curriculum those ideas that depart from the progressive agenda implicitly teaches students that conservative ideas are contemptible and unworthy of discussion. This exclusion, the California report points out, also harms progressives for the reason John Stuart Mill elaborated in his famous 1859 essay, "On Liberty": "He who knows only his own side of the case, knows little of that."

The removal of partisan advocacy from the classroom would have long-term political benefits. Liberal education equips students with intellectual skills valued by the marketplace. It prepares citizens to discharge civic responsibilities in an informed and deliberate manner. It fosters a common culture by revealing that much serious disagreement between progressives and conservatives revolves around differing interpretations of how to fulfill America's promise of individual freedom and equality.

It is certainly true that not all progressive professors intrude their politics into the classroom, but a culture of politicization has developed on campus in which department chairs and deans treat its occurrence as routine. "UC administrators," the California report sadly concludes, "far from performing their role as the university's quality control mechanism, now routinely function as the enablers, protectors, and even apologists for the politicized university and its degraded scholarly and educational standards."

In California, this is more than a failure of their duty as educators. It is also a violation of the law. Article IX, Section 9, of the California state constitution provides that "The university shall be entirely independent of all political or sectarian influence and kept free therefrom."

It is incumbent upon the UC Board of Regents, not to mention the governing bodies of other institutions of higher education across the country, to begin the long and arduous work of depoliticizing our universities and renewing liberal education.

Mr. Berkowitz is a senior fellow at Stanford University's Hoover Institution and a member of the National Association of Scholars board of directors. "A Crisis of Competence" is posted at www.nas.org/images/documents/A_Crisis_of_Competence.pdf.

Related Video

Hoover Institution fellow Peter Berkowitz on the politicization of higher education by activist professors

San Francisco Chronicle

SFGate.com

Education Debra J. Saunders

UC's leftist echo chamber drowns out diverse voices

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Political activism has drawn the University of California into an academic death spiral. Too many professors believe their job is to "advance social justice" rather than teach the subject they were hired to teach. Groupthink has replaced lively debate. Institutions that were designed to stir intellectual curiosity aren't challenging young minds. They're churning out "ignorance." So argues a new report, "A Crisis of Competence: The Corrupting Effect of Political Activism in the University of California," from the conservative California Association of Scholars.

The report cites a number of studies that document academia's political imbalance. In 2004, for example, researchers examined the voter registration of UC Berkeley faculty. They found a ratio of 8 Democrats for each Republican. While the ratio was 4:1 in the professional schools, in more political disciplines, the ratio rose to 17:1 in the humanities and 21:1 in social sciences.

Over the last few decades, the imbalance has grown. The report (found at sfg.ly/HjXiyV) noted, "The most plausible explanation for this clear and consistent pattern is surely that it is the result of discrimination in the hiring process."

UC Berkeley political science Professor Wendy Brown rejected that argument. (Yes, she hails from the left, she said, but she doesn't teach left.) The reason behind the unbalance, she told me, is that conservatives don't go to grad school to study political science. When conservatives go to graduate school, she added, they tend to study business or law.

"If the argument is that what is going on is some kind of systematic exclusion," then critics have to target "where the discouragement happens."

OK. Freshmen sign up for courses that push an agenda of "social justice." Most professors may try to expose students to views other than their own, but others don't even try. The message could not be clearer: In the universe where politics and academia converge, conservatives are freaks.

That's how ideologues self-replicate.

The fallout isn't simply political. The association scolds argue, "This hiring pattern has occurred just as the quality of a college [education](#) has sharply declined."

Campus reading lists require trendy books instead of challenging authors, like Shakespeare, who can draw students deeper into the English language. Teach-ins are notoriously one-sided. College graduates today are less proficient as readers than past graduates. The National Center for Education Statistics found that only 31 percent of college graduates could read and explain a complex book. In 1961, students spent an average of 24 hours per week on homework; today's students study for 14 hours per week.

At the same time, grades have risen. "Students often report that all they must do to get a good grade is regurgitate what their activist professors believe," quoth the report.

While she had not read the report, Brown doesn't dispute that today's students have trouble writing a "deep, thoughtful essay" about a passage from Hobbes or Milton Friedman.

"If Shakespeare were required, I would be thrilled," Brown stressed. But: "Don't pick on liberals for this." Universities have cut back on core requirements because students, parents and alumni revolt.

That may be, but in ideologically lopsided academia, there aren't enough voices to stand up for educating students about, say, the U.S. Constitution. Besides - this is me, not the report - in pushing protests, faculty essentially have assured students that they already know enough to occupy Sacramento. Only a third of them can read and explain complex material, but students already know better than lawmakers and voters how best to pay for education. Why study?

The proof is in academia's acceptance of this imbalance. The old, discredited excuse about why women didn't work in management that I heard when I was young - because they didn't want to - now somehow works for the left when it comes to conservatives and academia.

As for UC administrators, "A Crisis in Competence" concludes, "far from performing their role as the university's quality control mechanism, (they) now routinely function as the enablers, protectors, and even apologists for the politicized university and its degraded scholarly and educational standards."

Like so many other ailing institutions, they don't know how to change to save themselves.

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