Preface

It must be the planets. This was clear to me in 1994 writing my review article about turbulence in natural fluids like the ocean, atmosphere and galaxy. Galaxies of stars must be turbulent or there would be more of them, according to one of the books I was reviewing. This was my introduction to cosmology. If you don’t know what is going on, just make something up and move on. Oceanographers do this too. Why don’t galaxies fly apart if they are rotating so fast? Dark matter. Why is the ocean mixed when we never see any mixing? Dark mixing. In both cases you need to know about fluid mechanics and turbulence and fossil turbulence to get right answers. Turbulence theory is even worse. Because of a poem, everyone thinks they know turbulence cascades from large scales to small, but it is perfectly obvious by observing the growth of a turbulent wake or a jet or a turbulent anything that turbulence always grows from small scales to large.

Why planets? Planet-mass gravitational fragments appear when matter produced by the big bang gets cool enough to turn from plasma to gas. It’s easy. You know the viscosity and density of the gas and you know the rate the universe is expanding. Chug and plug. It took twenty minutes. Earth-mass gas planets now frozen solid are widely separated to match the density and are in clumps of a trillion to match the Jeans acoustic mass of a million stars. Another twenty minutes. I can teach this to freshmen. Every star is formed from mergers of planets, and has thirty million more of its own that it keeps eating till it gets overweight and explodes.

The timing was perfect. The Hubble Space Telescope team and C. R. O’Dell had just produced the Helix Planetary Nebula image showing thousands of evaporating planets and Rudy Schild had just published his quasar microlensing paper with the same conclusion: the dark matter of galaxies is not stars but planets in clumps.
So why are oceanographers not thrilled to know the turbulence in the ocean is mostly fossil turbulence and the mixing is done by fossil turbulence waves in beamed zombie turbulence maser action mixing chimneys? Why are turbulence experts not happy to realize turbulence is an eddy-like state of fluid motion where the inertial vortex forces of turbulent eddies are larger than any other forces that tend to damp the eddies out, so that the cascade of turbulence must be from small scales to large? Why are cosmologists not thrilled to know the standard model of cosmology they use is wrong, but can be easily fixed with a little fluid mechanics?

It’s all about money and marketing. Most oceanographers are on soft money and so are most astrophysicists. They dare not stray from standard models or their contracts will not be renewed and their papers not published. This works for a lifetime career in oceanography, but it cannot work much longer in cosmology. The flood of excellent new data will not permit it. Both peer review systems are broken and corrupt but cosmology cannot resist the facts much longer. The attached preprints show why. I am not the only one. An army of rebels are now ready to push the tottering house of cards of the standard ΛCDMHC model over the cliff.

So now it’s time for a commercial break:
This book is dedicated to the University of California at San Diego system that in its present mode of operation has provided numerous furlough days with no pay to its faculty. It is hoped any proceeds from this book will enhance cookie funds for UCSD freshmen and senior seminars. Funding for these have been sacrificed in the same spirit motivating UC to reduce faculty salaries and increase student fees to solve UC budget problems. The cartoon above is derived from the cover of Scott Adam’s book Dogbert’s Top Secret Management Handbook and the double-cross symbol of the Chaplin film “The Great Dictator” by me trying to get a raise. It complains that APM and PPM (policy and procedure) manuals of the University of California are not properly followed in the interests of saving time and money by corporate management behaviors and zombie managers, threatening UC policies of shared governance and causing the need for faculty to move toward unionization.

Similar complaints about UC management styles are reflected in the following, emailed recently by Mike Davis and titled “Solidarity”.

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Many years ago in the faded Art Nouveaux splendor of a Gorbals (Glasgow) pub, I met a man who told me an extraordinary story about his grandfather, a coalminer who had been killed in a pit disaster before the First World War. A methane explosion, followed by a roof collapse, had trapped his grandfather and his mates deep in the mine, where they were eventually asphyxiated. When rescuers reached their tomb days later, they found a final, defiant message chiseled into the coalface: 'God save our union.'

The spirit of these doomed Scots miners isn’t easily replicated in rational choice models of social action. Nor can simple economic calculation explain the fervor with which Lancashire cotton workers, whose wages depended upon Southern cotton and the British domination of India, supported Lincoln and later Gandhi. Likewise, from the 1934 San Francisco General Strike to Justice for Janitors in the 1980s and 1990s, California working people have repeatedly translated their passion for justice and dignity into the slogan 'an injury to one, is an injury to all.'

The labor and civil rights movements, to be sure, aren’t fairy tales, and the heroic moments are often counterbalanced by the petrification of militancy into leaden bureaucracy and the selfish calibration of seniority. Solidarity is too often an orphan. In our case, there are disheartening examples of the tenured strata ignoring the recent picket-lines of catering workers, secretaries, lecturers, and students.
UC faculty, indeed, are much like the residents of Jonathan Swift’s city of Laputa: distracted by their departmental micropolitics and the distribution of FTEs while they float on a cloud above the existential distress of K-12 and community education. The Senate faculty also must share responsibility with the Regents for the system’s transformation into a vast machine for the transformation of public research into corporate profit. Most UC campuses now more resemble gated communities than public temples of learning.

A lot of us have complained about this situation for years, but our discomfort has seldom moved us to action. But the challenge is now epic-historic: equity and justice are endangered at every level of the Master plan for Education. Obscene wealth still sprawls across the coastal hills, but flat-land inner cities and blue-collar interior valleys face the death of the California dream. Their children - let’s not beat around the bush - are being pushed out of higher education. Their future is being cut off at its knees.

The September 24 strike movement, in my opinion, is most important because it defends non-tenured employees and demands public disclosure of the Regents’ secret diplomacy. It is an elementary reflex of a progressive, humane consciousness: an antidote to the staggering selfishness and elitism of Andrew Scull and his Gang of 23.

A strike, by matching actions to words, is also the highest form of teach-in. This seed of resistance, of course, will only grow to maturity through cultivation by unionized employees and students. They are the real constant gardeners, and hopefully branches of a unified fight-back will quickly intertwine with the parallel struggles of CSU, community college, K-12 and adult-education workers.

The strike also provides a bully pulpit to counter the still widespread belief that the UC system has a unique dispensation and can once again negotiate its own special deal in Sacramento. Many of our colleagues are simply in denial. This time around, the first-class passengers are in the same frigid water with the kindergarten teachers and community college janitors.

The 24th is the beginning of learning how to shout in unison. And whatever the outcome, it at allows us write our beliefs on the coalface.

* UPTE/CWA has voted to strike UC on September 24

September 24, 2009, is the opening day of Fall Quarter at UCSD.
UCSD protests against faculty salary cuts and increased student fees to offset California budget shortfalls, San Diego Union, September 24, 2009.