

# Ignorance is Strength

Complexity is just too baffling to manage.

Let's consider the sex hormone estradiol in light of a huge anti-science campaign under way in our country.

Hormones such as estradiol bind to complementary receptors in our bodies like keys in locks. Those receptors then activate specific genes that accomplish major things like making two sexes look different or countering the effects of stress.

Did an intelligent designer produce hormone systems? When some people contemplate exquisitely complex systems like hormones and receptors, they conclude that evolution could not have produced such linkages, roll their eyes upward to some intelligent designer who must have engineered them, and quit asking questions.

On the other hand, did evolution produce hormone systems? When scientists like Joe Thornton at the UO contemplate complex systems, they roll up their sleeves. Joe has spent years observing hormones and receptors in living organisms. He has run experiments. He has published his observations, so other scientists can repeat the experiments to see if they get the same or contradictory results, or can add to what he has learned. Joe's questions never end.

Through this social process called science, Joe, his students, and other scientists are piecing together the mechanisms by which hormones and receptors developed at least 600 million years ago through natural, random processes (e.g., duplicating genes or mutations) and then spread through natural selection. The organism in which a receptor developed passed those genes on to succeeding generations, including us.

A court trial is going on in Pennsylvania this week about the origin of complex systems like hormones and receptors. On one level, the trial is about whether the Dover Area School District is violating separation of church and state by requiring school administrators to read an intelligent design versus evolution statement to ninth grade biology students.

At another level, this trial is the tip of an iceberg. Fundamentalists are disparaging science because they fear it challenges *God's* authority. Their attacks on science in turn feed the political right's attacks on uncomfortable scientific findings that challenge *their* authority.

Mandating the promotion of intelligent design against evolution has the effect of reducing *all* science, not just evolutionary science, to a story no more worthy of trust than any other story about the world. It pulls the ground out from under us, because then evidence from that ground (or 600 million-year old ocean organisms, or anything else in the observable world) is "just one theory." If scientific evidence is just one story among many, the stories coming from authoritative televangelists or warring presidents are often far easier to understand and more seductive than complicated, still-incomplete scientific evidence.

The right-wing's attack on science is exemplified by President Bush's flippant rejection of the Environmental Protection Agency's report that much of global warming is caused by emissions from automobiles, power plants, and oil refineries.

"I read the report put out by the bureaucracy," Bush told reporters. He didn't say he read "the report put out by scientists." He purposefully referred to scientists as "the bureaucracy."

This year the Bush administration changed National Forest planning regulations to lift restraints on logging, mining, livestock ranching, roads and off-road vehicles in our national forests. One of the changes eliminated the requirement that national forest decisions must be "consistent with" the best available science. The new regulations allow the Forest Service to merely "take into account" (and then presumably ignore) best available science when permitting activities that may harm native wildlife, plants, and ecosystems on the forest. The Forest Service says they removed the requirement that decisions be consistent with science because "formal science is just one source of information." One might guess about this administration's other sources of information.

These are not isolated examples. Science and scientists are being cut back or eliminated from the Endangered Species Act, all federal public lands management, ocean planning, federal websites, commissions, research institutions, and budgets. Key government scientific reports are being altered by political appointees.

Once uncomfortable or inconvenient evidence from the observable world is absent or swept away, other sources of information – for instance, fundamentalist religious leaders; powerful industries, or end-time presidents – will have freer reign.

As the dictatorial government proclaimed in George Orwell's novel, *1984*, "Ignorance is strength."

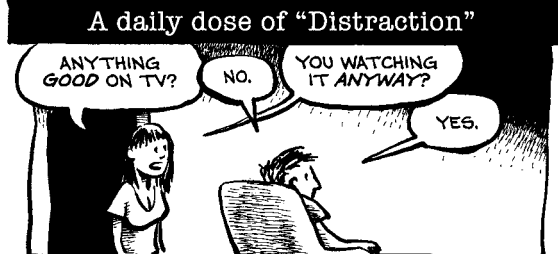
That government had it right: Our ignorance is authoritarian leaders' strength.



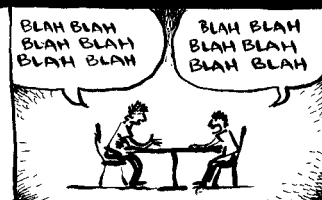
Mary O'Brien of Eugene has worked as a public interest scientist since 1981. She can be reached at mob@efn.org

A daily dose of "Distraction"

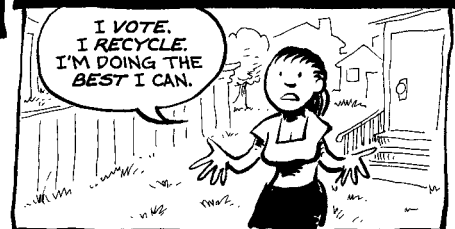
WE'VE LOOKED AT MODERN ILLS, NOW LET'S LOOK AT: MODERN CURES



The "Hot Air Cure" (popular in coffee shops, bars, and universities.)



Traditional "Rationalization Therapy"



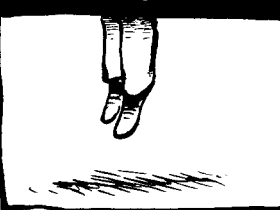
"Transference"



"Avoidance"



"Giving Up"



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## LETTERS TO THE EDITOR

### NOW WE KNOW

Like many long-time observers, I remember Jack Roberts when he was the firebrand mouthpiece for corporate Oregon, the extreme right-wing, anti-labor activist who, immediately upon his unbelievable election to Secretary of Labor, promised to eliminate the office. Cooler heads prevailed, but not for lack of trying on his part, and over two terms.

Lately, however, I've noticed in his letters to the editor and guest editorials a decidedly — one might even say "forced" — moderate tone, so much so that I wondered to myself: Huh; wonder what he's planning on running for. Well, now we know.

Given his past, not only should we not automatically assume that his current mild-mannered, reasonable incarnation is anything more than a smoke screen, but we should also NEVER put him in the Supreme Court. Unless of course one wants to see the rights of the average working Oregonian erode further.

Bill Smee  
Springfield

She represents the entire city — yes, even people that we progressives may not always agree with. Too often we in the progressive community let the perfect be the enemy of the good, as we referee from above the political fray. So we are writing to cry "foul" for a cover that we wish to penalize for "unnecessary roughness." Mayor Piercy deserves better than cheap shots.

Marc Baber, Joyce Berman,  
Dan Carol, Joy Marshall  
Eugene

### I'VE BEEN SPRAYED

After being dosed with herbicide last week (Ortho weed killer), poison drifted into my open room. I was very upset and my landlord and I went next door to see a man spraying next to our property. He said he'd stop there. I called the police and they would do nothing. I called the city of Eugene and got their complaint report form to write up and hand in.

I also called NCAP (Northwest Coalition for Alternatives to Pesticides) which provides a good article, "You've Been Sprayed, What You Can Do" (2001), and the on-line archives at www.persticide.org have good advice.

They've been battling the poison epidemic for decades.

NCAP said they get many calls for help from people sprayed in the Northwest. There are many legal suits over chemical farm spray drift, poisoning lands, people and animals. I'll check deeper about laws, policies and actions about these poisons used so widely in yards, lawns, golf courses, roadsides, schools, farms and forests.

Maybe nature will blast the U.S., slow or stop us if "peak oil" crashes. A blessing and

### UNFAIR TREATMENT

However fair and balanced your recent cover story (9/15) on Mayor Kitty Piercy was (or wasn't), we thought your cover art and caption ("Mayor Maybe") was very, very unfair. Mayor Piercy has reached out to councilors and community members in unprecedented ways, and has shown herself with the LTD, Sanipac, and other issues to be a real, hands-on problem solver. She intends to make Eugene a model for clean energy and create a stronger jobs base. It won't happen overnight and it won't happen without support from her base.

