



## Controlling Schools Using High-Stakes Tests: Moral Imperatives Inspired by Rachel Carson

by Audrey Amrein-Beardsley – October 13, 2009

*This commentary details the remarkable relationship between what Rachel Carson evidenced in her revolutionary book Silent Spring and how public officials in our field continue to use control measures, namely high-stakes tests, to monitor and regulate what is happening in America's public schools.*

*I am pessimistic about the human race because it is too ingenious for its own good. Our approach to nature is to beat it into submission. We would stand a better chance of survival if we accommodated ourselves to this planet and viewed it appreciatively instead of skeptically and dictatorially.*

E. B. White

In 1962, Rachel Carson's book *Silent Spring* was published. Carson evidenced how chemicals hurt the environment and all things living within it. She exposed the truth about the chemical industry and its financial control over what works. She revealed many of the surreptitious events contributing to how the general public's knowledge is often constructed, without examination but rhetoric and blind trust. And she challenged public officials to heed her claims and research for themselves the intended and unintended consequences of using pesticides.

Since its publication, some have credited her book with initiating the environmental movement that continues to be central to our social conscience, and critical to the way we think about our local and global ecologies. Although her book was met with fierce resistance and repudiation, particularly from the industrialists profiting from the chemicals they produced to control and destroy insects (namely DDT which was banned in 1972), the years since her book was published have revealed that, if anything, her warnings were understated.

Is it possible to declare war on life without destroying it? Perhaps what Carson evidenced in *Silent Spring* might generalize, beyond the laws of nature her accused dishonored. Perhaps her account about how social systems worked together to create chaos in the natural environment might parallel that which people continue to do in our social environment, attempting to control events but ultimately causing disarray. If in almost every shred of the natural and social world there exists some kind of underlying order (Wheatley, 1992), we might benefit ourselves and our future generations by accepting Carson's challenges to research the intended and unintended consequences of the social controls we too concoct.

Educational policymakers continue to pass top-down measures to control what is happening in America's public schools and ensure our educational system is performing up to par. And the public continues to be convinced that the policies put into place actually work. But policymakers have reached their peak with high-stakes testing. Although similar tales may be told about other initiatives, this *control measure* has been exploited for years with little evidence that high-stakes tests genuinely increase student learning, and if anything, do more harm than good (see, for example, Nichols & Berliner, 2007). Some disagree and have argued the opposite, however (see, for example, Braun, 2004).

We might compare this regulatory measure with DDT, which was sprayed universally so often without reservation, the public forgot to question its use, naively trusting that because it was familiar it was safe and effective. The research literature is saturated with studies about the consequences of accepting high-stakes tests for what public officials declare they are worth. But even though these studies are conducted by some of the finest educational researchers in the country, public officials often dismiss them (Taylor, Anderson, Au, & Raphael, 2006). The net result is that the public continues to rely on the logic of this accountability measure without proof that it actually works.

In Carson's book, public officials did not acknowledge the independent research findings from entomologists, biologists, and ecologists, although research financed by chemical companies was readily accepted. Research on the effects of the pesticides would not have been cost prohibitive and if anything may have caused companies significant financial loss. Lacking prudence, the government's futile efforts to control nature went on for decades. The U.S. Department of Agriculture (USDA) was largely to blame, as were the major chemical companies involved.

We might draw similar conclusions about the U.S. Department of Education (USDE). Perpetuating fear that our students are performing at low levels, officials continue to put into policy *blanket treatments* to control what it is administrators and teachers are supposedly not doing in schools. And they continue to tighten the noose, not understanding that each time they take more control they too might be causing more harm than good.

As has been evidenced, holding districts, schools, administrators, teachers, and students accountable for that which they

do is toxic to the system. High-stakes tests have led educators to teach to the test, focus inordinately on test preparation, narrow the curriculum, cheat, exclude low scoring students from participating in the tests, etc. And because students are rarely exposed to one practice alone, the interaction and summative effects of such actions are surely more damaging to student learning than one might expect. Who knows what the residual effects on future generations might be?

In the end, Carson (1962) states, "in a triumphant vindication of Darwin's principle of the survival of the fittest" (p. 8), insects fought back through genetic selection and found ways to circumvent the pesticides and adjust to their new yet impure environments. Regrettably this was not considered an indicator of failure. It spurred the chemical companies to develop even harsher poisons. As quickly as new and improved chemicals were developed to control the insect populations, the insects fought back. Even DDT became useless and "joined the list of chemicals no longer effective. The flies, meanwhile, had become 'fantastically abundant'" (p. 267).

In this case, what have become copious are the aforementioned practices educators are using to evade and adapt, in reaction to public officials' attempts to control them. Humans too are showing their extraordinary capacity to survive. Alas, this is not considered an indicator of failure either. If anything, it has spurred the government to develop even more direct measures (e.g., controlling for student exemption problems by requiring minimum participation rates). We too have inherited a "system of laws and loopholes, deadlines and delays, [and] facades that barely disguise a wholesale failure of policy" (Gore, 1994, p. xxi).

Fortunately, during the time Carson wrote her book, some naturalists were working on other control methods. In Europe, instead of relying on poisons to protect roses from soil nematodes, plant protection officials planted marigolds to help manage the nematode population. The roses planted with the marigolds flourished, more than roses without their newly discovered, natural allies. What if districts and schools, primarily in America's poorest cities, were given what would seem to be natural supplements? Would they too thrive?

Like the Environmental Protection Agency (EPA) established in 1970, largely due to the efforts of Rachel Carson and the belated aftereffects of her book, might there be an Educational Protection Agency (EdPA) that exists to protect our country's intellectual health? It might involve an alliance of bipartisan researchers, school leaders, educators, policymakers, and analysts who use evidence to protect and promote our children's well-being. And it might be developed, similar to the EPA, to (1) control *pollutants* that may harm our children (e.g., inequities in school funding and high-stakes tests, as argued herein), (2) help repair damage done (e.g., equalize inputs to better measure outputs), and (3) establish new, research-based criteria and policies to help our leaders make a better educational, and in this case assessment, system.

What might work better is indeed a holistic assessment system, by which student learning is not measured solely using one high-stakes test. Instead, a holistic system might consist of (1) traditional, standardized assessments used in more formative and valid, value-added ways; (2) end-of-course assessments locally developed (e.g., at the district level) and more precisely matching course content; (3) performance assessments including culminating papers and projects (e.g., Capstone projects or grade-level theses); (4) portfolio assessments including evidence of student growth; and (5) school examinations during which inspectorates visit schools and interview educators to determine, in context, whether standards are being met (see, for example, Hursh, 2008; Jones, 2004; Nichols & Berliner, 2007).

But making these decisions would not be up to me, or the aforementioned researchers, school leaders, educators, policymakers, and analysts alone. Making these decisions might, however, become the responsibility of a representative treaty of them.

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