

Beyond Cognition Children and Television Viewing

Eugene Schwartz

Studies published in the July 2005 Archives of *Pediatrics & Adolescent Medicine* conclude that television viewing tends to have an adverse effect on academic pursuits. In spite of this, many researchers are reluctant to voice condemnation of television viewing by children. "Parents should be encouraged to incorporate well-produced, age-appropriate educational TV into their children's lives. Such programming represents a valuable tool for stimulating children's cognitive development," write Ariel Chernin and Deborah Linebarger of the University of Pennsylvania.

These new studies, in common with most studies that have appeared in past decades, generally assess television's effect on children's cognitive faculties while ignoring the deeper, less-easily quantified effects of TV on children's lives of feeling and willing. Such cognitive studies tend to focus exclusively on the content or "programming" of TV as a positive or negative force. Approaching the question from the perspectives of children's feeling and willing faculties might give more insight into the intrinsic nature of the television experience.

A young child or adolescent sits before the television set, focused on the screen, which serves as a border or threshold separating the inner hardware of the TV and the outer space into which its imagery flows. Behind the screen, a condensed, high-speed beam of electrons flies through a cathode ray tube and hits the back of the TV screen. The cathode ray tube encloses a vacuum; and this tube has a history worth introducing.

In the late nineteenth century William Crookes (1832–1919), a distinguished chemist and physicist, embarked upon a personal investigation of "spiritism," especially those phenomena said to be caused by the intervention of departed souls. Skeptical at first, Crookes soon became convinced that the realm of the dead could be studied with the same scientific rigor as the realm of the living. If the living thrived in air, perhaps the dead could be found in an airless vacuum, and perhaps the same electrical currents that seemed to "animate" so many phenomena in Crookes' time could be used to make dead souls manifest and visible. This passionate quest led Crookes to develop the "Crookes Tube," a partially evacuated bulb through which "cathode rays" were generated. As the tube was further evacuated, unearthly swirls of light and color appeared, without any apparent ether or medium to convey them. Crookes may not have encountered the spirits for whom he searched, but he had established the basis for the cathode ray tube and laid the foundation for the modern television.

The TV screen is coated with phosphors, substances that glow when hit by an electron beam, the path of which is controlled by electromagnetic fields. On the other side of the screen, the child experiences these bursts of energy not as the thousands of small dots or pixels that they really are, but rather as recognizable images, e.g., a tree or a human being. These images are static, but the speed with which they are scanned onto the screen calls

upon the child's "persistence of vision" to present the illusion of moving images.

The processes described above occur regardless of the content that is transmitted. From the cathode ray tube, electrons—fragments of matter—stream, at high velocity, toward the child, while from the child form-giving forces that restore the fragments into the semblance of wholeness stream toward the television.

From one side, the child is bombarded, while from the other, he or she is drained. We could say that the child's own etheric forces cohere the pixels into a "form," while the child's astral forces animate the form into "movement." Forces of life and soul that should be serving the child are instead drawn out to serve the image on the television screen. The speeding electrons are like an attack of inchoate will forces, while the facul-

ties the screen draws from the child drain the child's life of feeling. It should be no surprise that EEGs reveal that a television viewer resembles someone in a state of deep sleep.

The "passive-aggressive" nature of television described above may help us to understand why it is an inherently unbalanced medium. We need only contrast this with the enlivened forces of feeling that awaken when a child's own will is engaged in artistic activity. Perhaps William Crookes' suspicion that the cathode ray tube was a medium in which deadening forces flourished is not so far-fetched after all. By its very nature, television undermines the healthy interplay of feeling and willing that arises as a child's faculty of imagination. Perhaps future studies of the effects of television will take into consideration, in one form or another, its impact on the threefold nature of a human being.

International Student Assessment and Computer Use What Do Recent PISA Surveys Show?

Jon McAlice

The Program for International Student Assessment (PISA) is a multi-national survey made every three years (2000, 2003, 2006...) of 15-year-olds in the principal industrialized countries coordinated by the Organization for Economic Cooperation and Development (OECD).

The survey was conducted in 43 countries, including the United States, in the first assessment in 2000 and in 41 countries in the second assessment in 2003. At least 58 countries will participate in the third assessment in 2006.

Tests are typically administered to between 4,500 and 10,000 students in each

nation to assess how well students near the end of compulsory education have acquired some of the knowledge and skills that are deemed essential for full participation in society.

PISA studies raise questions. Research based on data from the 2000 PISA tests, for example, raised serious questions about computer use and student learning. Thomas Fuchs and Ludger Woessmann of the CESifo economic research organization in Munich cross-referenced student responses concerning computer availability and use with corresponding test scores to create a multivariate picture of the relationship between computers and stu-

dent learning. Although descriptive and largely anecdotal, the report shows that the sweeping claims of many educational policy makers and software company representatives may well not be valid. Neither the availability of computers nor their frequent use seems to have any positive impact on student learning.

Neither Fuchs nor Woessmann is a teacher. Their interest in education springs from their concern for national productivity. Economic growth in OECD countries revolves around human capital. Are schools providing an environment that supports the development of marketable skills? A number of papers in recent years point out that computer skills are less marketable than are math and reading skills and that increased focus on computer literacy in schools throughout the world has had a negative effect on the attainment of the higher-level thinking skills most sought after in the global market.

In their study of computers and student learning, Fuchs and Woessmann looked at the availability and the use of computers in school and at home. Statistical analysis of student responses to questionnaires in relation to their test scores led the researchers to support a growing body of research questioning the efficacy of the computer as a tool for learning. The mere availability of computers, whether at home or in the classroom, seems to have no significant effect on students' performance on the PISA tests.

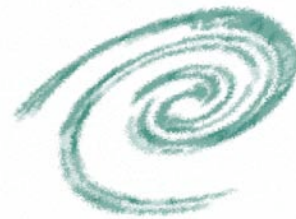
The way computers are used and the frequency of use, however, did. Students who use home computers primarily to play games or for instant messaging had generally lower scores than those who used them to write e-mails, visit web-pages, or do research. This is not surprising, but results concerning the frequency of in-school computer use are somewhat more so. Students who report never using the computer in school have relatively low test scores. Those who report using the computer often, "several times a week," had even lower scores. Those with the highest

scores report using the computer "a couple of times a month to a couple of times a year."

Does the frequent use of computers help youngsters prepare themselves for a working world in which computer technology is ubiquitous? Fuchs and Woessmann say no. Based on data provided by the PISA tests—tests designed to assess student preparedness for the challenges they will meet in the world—the more students use computers, the less prepared they seem to be. The intentional use of computers by students who have a goal, however, does allow them to access data that might otherwise be unavailable.

OECD reports based on data from the most recent PISA tests (2003), in which over a quarter of a million 15-year-olds in 41 separate countries participated, highlight other aspects of how schools can make a difference in preparing students for the challenges of today's world. School autonomy is close to the top of the list. Schools that manage their own budgets and have a say in hiring teachers and developing their own curricula seem to be more effective at creating a healthy learning atmosphere. Schools in which teachers use their own tests show a positive effect on student performance. A large percentage of students said that their success was due in part to the willingness of teachers to take the time to answer their questions.

The third round of the PISA tests will take place during this coming school year and will focus particularly on science literacy.



State Funds for Waldorf Schools in England

Douglas Gerwin

The British government has published its first major study on Waldorf education, including suggestions on how the state could collaborate with Waldorf schools in England. The 200-page study, commissioned by the Department for Education and Skills (DfES), was led by Professor Philip Woods of the University of West of England, Bristol and included 21 of the 23 Waldorf schools in England.

The aims of the study were five:

- to form a comprehensive “map” of Waldorf education as practiced in England
- to research and report on “best practices” in these schools
- to uncover differences and similarities between Waldorf and government-funded schools
- to explore how these different schools could collaborate
- to articulate the obstacles Waldorf schools would face if they were to forge closer links with state education

In general the report speaks favorably of Waldorf (often called “Steiner”) schools in England, which at present do not receive government funding. “Overall we found areas of good practice such as the early introduction and approach to modern foreign languages, development of speaking and listening through oral work and the combination of class and subject teaching for younger children,” says Professor Woods. “We also found that the emphasis given to teachers’ reflective activity and heightened awareness as well as the non-hierarchical, collegial form of running schools, offers a contrast to current practice in the maintained [the British term for state-run] sector and may prove relevant for main-

stream schools.”

On one hand, the study found that Waldorf schools offer all of the recognized subjects mandated by Britain’s “National Curriculum” as well as subjects unique to Waldorf education, such as eurythmy and an early attention to foreign languages. In this sense, there would be no need to modify the Waldorf curriculum to bring it in line with nationally required courses.

On the other hand, the study notes that the government’s approach to standardized tests in the lower grades would not be an appropriate way of evaluating the success of Waldorf pupils, and alternative forms of assessment would have to be explored. The report urges the government to accept “alternative ways by which pupils leaving Steiner schools can demonstrate capability for further study and employment, building on current practice.”

Published in June 2005, the report also examines the life of Waldorf teachers, noting that most of them “work for lower pay and in less favorable conditions” than teachers in state-funded schools. It urges Waldorf teachers to become better acquainted with “theory, research, policies and practices in mainstream education.” According to Professor Woods, “We see a great potential benefit from mutual dialogue and professional interaction between Steiner and mainstream educators. As well as the good practices we have identified from Steiner schools, there are also areas in which Steiner schools could benefit from maintained sector practices such as management skills, organizational and administrative efficiency, classroom management, working with older secondary school children and record keeping and assessment.”

However, the report warns that “transferring practices between schools of differing philosophies is neither straightforward nor in all cases appropriate and may not achieve the expected consequences because they are removed from the supportive school context in which they originate.”

The report concludes with a call for further study to explore “equivalence of qualifications” among teachers in Waldorf and state-run schools.

The results of this report raise the possibility of state funds flowing for the first time to English Waldorf schools. Plans are already underway to convert the Hereford Waldorf School, which is currently housed in a converted barn, into an “Academy” of about 300 pupils aged 5 to 16. The school, located in the tiny village of Much Dewchurch in the rolling hills of western England, would be sponsored by the Steiner Waldorf Schools Fellowship (the British equivalent of the Association of Waldorf Schools of North America, or AWSNA) and financed with government money, with about 10 per cent of funding still coming from the private sector in the form of gifts. But obstacles remain in determining alternative forms of assessment and accountability before the plan can be implemented.

While state-funded Waldorf schools are not new on the European continent, the Hereford academy would be the first state-supported Waldorf school in England. In this sense the Hereford school could be seen as a test case for the collaboration between government and Waldorf education. And it would be tempting to draw this case into the discussion raging on the American continent about the future of U.S. charter schools, a growing number of which are drawing upon Waldorf curriculum and practices. It would be misleading, however, to equate the British experiment with the American charter schools, since all English pupils—in both state and independently funded schools—are

already required to take government-mandated tests during their upper school and high school years if they intend to move on to higher education. These tests already have significant impact on the curriculum in the upper school years. This is not the case in the United States, where even the national SAT or ACT tests are not mandated as part of the high school curriculum, and indeed not all universities require them of their applicants.

References

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available from JanniSteinerEY@aol.com

On Looping

David Mitchell

Last summer Alan Finder of *The New York Times* wrote about the benefits of “looping,” a practice in which a teacher follows a class for a number of years. “Having a teacher stay with a class for more than a year—or looping, as it is known—is on the rise, according to many experts. As educational innovations go, it is remarkably simple. So are its benefits, proponents say. Teachers get to know their students, and the students’ parents, extremely well. They know each child’s strengths and weaknesses, and the children know the teachers’ expectations and methods.”¹

Finder then lists public schools and school districts across the country that practice “looping.” He notes that this practice helps “schools improve their standardized test scores.”² He supports this claim with the suggestion that by having the same students, teachers do not have to continually assess them and can instead pay more immediate attention to their individual needs. He could have added that when these needs are met, the stress on children and teachers caused by persistent testing is no longer so prevalent.

Another reason Finder gives to support “looping” is that anxiety is reduced in the children at the beginning and end of the school year: “Research into looping suggests that it can pay substantial dividends. The school district in East Cleveland, Ohio, experimented with looping from 1993 to 1997. A class in each of four elementary schools stayed with their teachers for three years, generally from kindergarten through second grade. The teachers worked extensively with parents to reinforce lessons in school, and the classes also met for five weeks each summer.

“After three years, students in the looped classes scored an average of twenty-five per-

centage points higher on standardized tests in reading, language arts and math than other students in the school district, said Frederick M. Hampton, an associate professor of education at Cleveland State University who oversaw the research project.”³

Even with these encouraging results, the East Cleveland School district stopped the program after 1997 because of new administration and complaints from some teachers that they were being required to learn the curriculum for a new grade. The school bureaucracy did not acknowledge the benefits of looping but instead focused on efficiency and maintaining the status quo.

The complete article can be found on the website of the Research Institute at www.waldorfresearchinstitute.org.

References

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2. Ibid.
3. Ibid.

The Children's Food Bill

Christopher Clouder

Restrictions on TV advertising aimed at children in countries such as Sweden, Denmark, Belgium, Greece, and Norway are tougher than those upheld by the Advertising Standard Authority in the U.K. In Sweden, advertising for children younger than twelve is banned. Two years ago former Labor MP Debra Shipley introduced an unsuccessful bill that would have banned advertising food and drink during children's programs. In the last election the government promised to take action and is currently trying to tighten existing rules without new legislation.

With increased concern about children's health and obesity, however, there is growing public support for measures that restrict advertising and that discourage consumption of junk food. To this end a new bill, *The Children's Food Bill*,¹ will have its second reading in Parliament on October 28, 2005.

The Children's Food Bill seeks to protect children from unhealthy food marketing, to create a definition of good food that takes into account the presence of additives and sustainable food production, to set compulsory minimum standards for manufacturers, to improve the quality of food in schools, to ensure that all children have essential knowledge about food, and to promote healthy food to children. The bill is primarily promoted by Sustain,² an alliance for better food and farming that consists of more than 100 Non Governmental Organizations (NGOs). The Alliance for Childhood³ is one of the 145 additional organizations that support *The Children's Food Bill*.

MP Mary Creagh will introduce *The Children's Food Bill* following her success with the Ballot for Private Members Bill, which requires 100 MPs to be present to achieve a

"closure" vote. She has also tabled a House of Commons Children's Food Early Day Motion, EDM 378, which MPs are asked to sign to demonstrate continued cross-party support. An earlier EDM, 1256 on this matter, tabled in May, attracted 248 MP signatures. Activism and grassroots pressure in the U.K. may also help to ensure success of *The Children's Food Bill*.³

References

1. www.childrensfoodbill.org.uk
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3. www.allianceforchildhood.org.uk



All Together Now

Stephen Keith Sagarin

Teachers—leading your students in reciting poetry may not be simply a path to improved memory, classroom harmony, and artistic expression. It may also be a path to improved health.

Researchers in Germany led 20 healthy subjects in an experiment that demonstrated a possible physiological basis for the therapeutic effects of reciting poetry, in this case the hexameter verse of *The Odyssey*. They compared spontaneous breathing, controlled breathing, and breathing during the recitation of hexameter verse with corresponding heart rhythms. Hexameter verse is verse in which a line of poetry contains 6 alterations between stressed and unstressed syllables. Researchers used a translation of *The Odyssey* that was faithful to the meter of the original Greek. Subjects walked rhythmically throughout each trial, whether or not they were reciting poetry, raising and lowering their arms to facilitate air exchange during breathing; a researcher accompanied them, leading them in recitation. Heart rate and breathing synchronized significantly better during recitation of hexameter poetry than they did spontaneously or when breathing was controlled without speech. And here we have a beautiful image of science at work—twenty people walking in a circle, speaking Homer, flapping their arms, with electronic measuring tools attached to their nostrils and chests.

Synchronization between breathing and heart rate is believed to have a healthful or salutogenetic effect, possibly increasing oxygen uptake in arterial blood, increasing blood flow in the brain, lowering blood pressure, and calming (or activating, depending on heart rate) mood. Further, psychosomatic effects may increase resistance to disease and increase flexibility with regard to maintaining

balance or homeostasis among different physiological processes in the body.

Previous research on cardiac patients has demonstrated that roughly 6 breaths per minute—a significantly lower breathing rate than normal, spontaneous breathing—have the most beneficial effect. Although breathing may be controlled at roughly 6 breaths per minute without recitation or speech—by counting or using a metronome, for example—heart rate did not synchronize with breathing here as well as it did during recitation. More important, reciting hexameter verse naturally controlled breathing at around the optimal 6 breaths per minute while raising heart rate to more than 80 beats per minute, higher than for spontaneous breathing or for controlled breathing.

Other forms of artistic and religious speech—prayer, repeating a mantra—may have similar effects.

The physiology of the effect demonstrated in this experiment is not well understood and will be explored in future research.

The full article as printed in the *Journal for American Physiology* can be found at: www.waldorfresearchinstitute.org

