



Photo: Ontario Women's Directorate Resource Centre

Integrating Art & Science

Terri Gray

La science des années 50 se situait au-delà de la moralité et de la politique. Liés à l'industrie, à la technologie et à l'ingénierie, les hommes de science ont produit l'Age de l'espace. L'art, les humanités, l'économie, et l'écologie doivent s'intégrer pour nous ramener à la terre.

In 1959, I was a student of fine arts in Manitoba, translating sensory perception into two dimensions, identifying Byzantine architecture, studying French literature, Milton's poetry, and the phi-

losophy of Paley, Bentham, and Kant.

In order to memorize the material in the one science course that was required, I tried to set blood-grouping formulae and Mendelian laws of genetics to music. I realize now that the arts and humanities were considered subordinate fields, appropriate to persons socially conditioned to subordinate roles. Supreme status was given to mathematics and science, appropriate fields of study for persons conditioned to compete, achieve, and dominate.

It was understood clearly by the students of that time that Men of Science

were to be exempt from ethical constraints or environmental concerns, in order to freely explore all the potentialities of "Pure Science." If Einstein's theories produced a bomb, that was the technicians' problem and the politicians' responsibility, not the scientists' concern.

Art, education, and psychology adopted forms and structures which could be measured and proven and which demanded increasingly controlled environments. Information received by the "right brain," discovery and observation of natural phenomena, individual inspiration, and the integration of living systems was subordinate to the accumulation of "specialized" information and the production of engineering systems designed to control the environment right down to its genes. The underlying value has been one of domination and control.

By the 1970s, the concept of ecology and the study of environmental problems became established as an alternative to the vertical thinking of space-age science and technology. As Sky Lab descended unprogrammed, the urgent need to stop the spread of pollution and to restore health to our life-support systems, earth, air, and water became a priority. Ecology as a science and environmental studies do not, however, receive funding which can be considered adequate, much less be compared with military/industrial research budgets. Without status, ecologists represent "motherhood issues."

Over the past twenty years, the urgency of addressing these issues in the interest of generations of children I've either produced or taught in the public-school system has given me an avocation.

From the genetics text I used in 1959, I learned that there is no level of ionizing radiation which does not produce genetic damage and, ultimately, cell mutations, particularly in the reproductive and blood cells, and that all radiation is cumulative in proportion to the dose, regardless of the length of time and intensity of the dose.

Over the years, I have questioned doctors and lab technicians on their casual use of x-rays, their unquestioning acceptance of nuclear medicine as essential to progress. I've clipped newspaper articles about university depart-

ments pouring radioactive substances down drains into the river system or improperly disposing of radioactive materials. In the acceptance of the technology, there has been a general denial and trivializing of the hazards.

I have tried to monitor the construction of nuclear reactors in North America and Europe and the attempts to contain and transport spent fuel and radioactive waste. I have collected government reports on the costs of generating electricity with atomic fuel and data on the expected life-span and mothballing of existing nuclear plants. I have tried to understand the Nuclear Liability Act. Who is responsible for compensation from a nuclear accident?

I have spoken to uranium miners and tried to convince them that there are employment options if they and their unions demand totally safe working conditions.

As a public-school teacher, I have tried to encourage science teachers to balance the hard-sell promotional material of Atomic Energy Canada Ltd. with information on environmentally appropriate technology and systems. The integrating of many forms of energy conservation, the use of renewable, non-polluting energy sources, and small, efficient, labour-intensive systems is neither well understood nor well documented for the junior and high-school student. Many are still encouraged toward a romantic, inter-galactic escapism.

There is a great need for materials which teach in an interdisciplinary context and integrate art and the humanities with economics, science, and technology. Environmental laws of time and balance, respect for the viability of living organisms must be taught if we are to produce people capable of dealing with genetic engineering for fast profit and nuclear engineering for astronomical destruction. In the 1980s, we must learn to observe phenomena and achieve poetry and to regard health and well-being as profits to be shared.

Terri Gray is a public-school teacher specializing in art. She has produced a program on "Women in the Arts in Manitoba" for public television and a series of television programs dealing with environmental issues.

REPRINT OF CATALOGUE NOW AVAILABLE

The University of Waterloo Library has recently reprinted Number 7 in its Bibliography Series, **A Catalogue of the Lady Aberdeen Library on the History of Women**. The catalogue contains entries for some 1400 items which form the "Lady Aberdeen Library" donated to the University Library by the National Council of Women of Canada in 1967 as a part of their Centennial project. Formed by Council members from the early 1950's to 1967, the Library was named in honour of Lady Ishbell Aberdeen, wife of one of Canada's Governors-General and founder of the National Council of Women of Canada. The catalogue presents a unique source of material for those studying the women's perspective whether it be in a historical, literary, political or social context.

Compiled by Jane Britton, (Library Assistant, Rare Books), the 237 page catalogue is available for \$10.00 from:

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