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Biesheuvel, Simon

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Johannesburg College of Education
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The Role of the Teacher in a Changing World

S BIESHEUVEL

Of the many features that characterise the 20th century, the rapidity and impact of change in the circumstances of our daily lives is by far the most significant. Permit me to spend some time on outlining the nature and extent of these changes, before I point out their relevance for education and for those now preparing to enter the teaching profession.

Within the span of one lifetime the development of transportation has radically changed our mobility, our range and ease of movement. The motor car, still a quaint novelty for sportsmen during the first decade is now an indispensable amenity and at the same time a major generator of social and economic problems. Urban congestion, the encroachment of highways, the toll of accidents and uneconomic energy expenditure are but a few of these. Close in its wake came the aeroplane. In its meteoric growth from the rickety contraption in which the Wright brothers first flew a heavier than air machine in 1904, to the supersonic Concorde of the 1970's, it has virtually abolished terrestrial distance. Moon landings have moved space travel out of the realm of science fiction.

The invention of the triode vacuum tube or thermionic valve by Dr Forest in 1906 and its first commercial use in 1915 for long distance telephony opened up a new verbal communication era and also cleared the way for radio, television and most recently Telstar and the communication satellites. Everything is happening as it were here and now, and our area of concern and involvement inevitably expands.

The electronic computer also belongs to the offspring of the vacuum tube, though the later invention of the transistor has greatly extended the scope, cost and convenience of its use. Its widespread effects on everyday life and technology, from booking theatre seats to plotting the course of space probes, are truly incalculable, to put it paradoxically. The century's greatest scientific achievement, and potentially also its most calamitous was the discovery in 1902 by Rutherford and Soddy that through radio-activity the atom of one element could change into that of another.

The atom was no longer true to its name as the smallest indivisible particle of matter. In 1919, Rutherford disintegrated the nitrogen nucleus. The immence energy locked up in the atomic nucleus could be set free. It was only a matter of time and the pressure of necessity imposed by World War II, before it was found that the release of energy through nuclear fission could take the form of an explosive, or a controlled chain reaction, the former leading to the 1945 Hiroshima bomb, the latter to the first nuclear reactor to produce energy in 1955. Once again the outcome of either for good or evil is still incalculable. In less spectacular and controversial ways, science and technology have contributed to the convenience and pleasure of everyday life. Recreation and home life have been brightened by the cinema, radio, recorded music and television. The housewife has lost the convenience of home deliveries or the shop around the corner, but has gained facilities such as the deep freeze, pressure cooker and washing machine, all now within the reach of an appreciable number of people.

Life expectations have risen by many years through better nutrition, public health, surgical and medical advances, particularly vaccines and anti-biotics. But opposing this trend there is the ever-present threat of more and more deadly armaments which might suddenly shorten the life of millions, and the long-term diffuse effects of a variety of pollutants.

So far I have singled out science and technology as the major change producing agents, but change has been equally far-reaching in geopolitics, economics and psychology. Between 1900 and 1970, world population more than doubled, from 1610 million to 3650 million. Nothing has imposed greater stresses on all aspects of life, with threats of worse to come, than this phenomenal growth.

There is little resemblance between the African Geopolitical map of 1900 and of today. Then there were four independent states, the Transvaal and Orange Free State Republics, Ethiopia and Liberia — now there are fifty. Elsewhere, particularly in Asia, and of a rather different order in Europe, there have been equally significant changes. The world was dominated by the Pax Britannica and its "dominion over palm and pine."

But what Kipling warned could happen in his poem *Recessional,* written in 1897, has indeed come to pass, but for other reasons than those about which he wrote.

"Lo, all our pomp of yesterday, is one with Nineveh and Tyre." Colonial empires, some with a history of centuries, have been wiped out in a mere 25 years. A rash of new states strut on the world stage, playing the new super powers, USA and USSR against one another, whilst China watches silently from the wings. In economics, all our old verities are gone. No one understands inflation. No substitute has been found for gold as a medium of monetary exchange. Future financial and commercial planning has become uncertain and hazardous. The preparations for a second global war saved the modern world from the worst economic crisis it had ever known: the great depression. We are consumed with fear that only a third conflagration can save us from another impending economic collapse. One could reasonably have expected psychology, as the scientific study of man, to have become a stabilising force in man's confrontation with rapid change, but this was not to be. During the last quarter of the 19th century, it made a promising start as a new experimental science with some 40 laboratories in 15 countries. But disagreements soon arose about its nature, aims and methods, leading to ideologically orientated schools, differing sharply about the nature of man, and his adjustment problems. Instinct, intelligence, mind, consciousness, will, were at one time or another swept away as meaningless, non-existent, illusions or inappropriate. There is no common ground between those who see all behaviour as the outcome of learning, or as determined by the unconscious, except that both deny man's autonomy.

The more recent view of man as an existential void at least endows him with the freedom and capability of choice to determine his mode of existence, but no support on how to exercise this freedom. A bewildering plenitude of views, constantly changing and displacing each other, denies us any certainty.

ADAPTATION TO CHANGE

Adaptability is the most characteristic feature of man's behaviour. The human brain has enabled him to dispense with instinctively determined behaviour patterns. His adaptation is, however, helped along by culture, the accumulated experience of a social group in meeting its life circumstances and the background for individual learning. He relies also on habits, without which every situation would be a problem to be solved anew.

The more rapid and fundamental the changes in the physical and social environment, the less meaningful will be the cultural guides because they relate to the past and change but slowly.

There is little point in acquiring habits for they will be inapplicable soon after they have been established. The problem will be even greater for future generations, because the ever-changing present provides little scope for the establishment of a stable culture. Under such circumstances, the adaptive capacity of man is in danger of breaking down. In "Future Shock" Alvin Toffler has argued that this is happening already. Man can no longer cope with the uncertainties, stresses and nerve-racking tempo of modern life. More and more people will emotionally and morally disintegrate. The picture presented by him is overdrawn, but his basic thesis is correct. Stress reactions will be diverse, depending on local, cultural and individual circumstances. Virtually everyone will change habits, attitudes and expectations. In America, city dwellers are beginning to seek a simpler life, away from the metropolis.

These are normal adjustments. Amongst those who stay the course many suffer a blunting of sensibilities, which could account for the violence, horror and sexual excesses that are standard fare in entertainment today. Rising divorce rates and illegitimacy are also significant. Escape reactions are seen in those who reject "the establishment", join way-out religious sects and political movements, or simply opt out as the wandering hippies do. Neurotic disorder and suicide are typical stress reactions, and they are on the increase. Street violence, mindless vandalism and drug addiction, are among the more serious forms of social maladjustment. Our task must be to prevent all this from getting out of hand.

This poses the question: What is the role of the teacher in a rapidly changing and unstable world? If education is to be a preparation for life, how should it set about its task when the habitat, the social order, our daily living, are constantly changing and the future is highly unpredictable?

This is a momentous question for the teaching profession. For although the School is only one among a number of educational institutions, next to the family it is the most important one. There are those who see the School as largely irrelevant in its present context, but this is only because its functions have not been redefined. It may be that its development has lagged behind the times and that it is now fulfilling an obsolescent and too one-sided a role.

To play their part in preparing young people for life in the world as it is today and as it could be tomorrow, four distinct aspects must be taken into account. These are:

1. Today's exponential growth of knowledge.
2. The increasing complexity and interrelatedness of the circumstances of life.
3. Current changes in social and moral values.
4. Personality and character changes.

THE GROWTH OF KNOWLEDGE

The inculcation of knowledge has always been the special domain of scholastic education. Today, this task presents some major problems. Scientific and technological knowledge and other factual information is being generated at a prodigious rate. It has been estimated that whereas the people living today constitute about 5 percent of all humans who have lived on this globe, between 80 percent and 90 percent of all scientists who have ever lived are alive today. And they are all researching and publishing with far more powerful and efficient means at their disposal than possessed by the scientists of even one generation ago. Moreover, it has also been estimated that new factual knowledge has only a half-life — to use a physical metaphor — of some five years. Consider for how long Newtonian physics held sway, and how rapidly new postulates — relativity, quantum theory, wave mechanics, the uncertainty principle — transformed it in the early years of this century. Vast areas of knowledge must now remain, even superficially, outside the ken of the majority of men. My review of the changes in everyday life that have come about as the practical outcome of scientific advances, has given some inkling of the extensiveness of the growth in knowledge. Much of this knowledge is specialised and advanced and the concern of the Universities; but how much and what should be dealt with in the schools, and at what levels, bearing in mind that diminishing proportions reach lower secondary, higher secondary, undergraduate and graduate teaching? Should we not all know something about the basic constituents of inanimate and living matter, the atom and the cell; evolution and genetics; the nature of mind and thinking; money, trade, public finance and economics; ecology and the habitat that sustains us all? One could go on indefinitely. Teachers may shrug their shoulders and say that they can only teach what the curriculum prescribes, forgetting that some teachers eventually fill the positions where curriculum decisions are made and that it is pressure from below, through teachers' associations, that can materially influence these decisions. However, all teachers are concerned with the fundamentals of reading, writing and arithmetic, even those in secondary schools, for I am not only referring to the mechanics of these skills, but also to their intelligent use. In these days of video-tapes and visual aids, typewriters, pocket computers, multiple choice tests, it is more than ever important that pupils should truly understand what they are doing rather than just press the right button or make a

cross in the right place. They should be able to formulate their thoughts and express them clearly and in an articulate manner. They should have reading facility; cultivate the habit of assimilating what they read, which means more than just comprehending but relating content to other knowledge they already possess. Above all, they should develop a keen interest in reading, for it is the best means of staying abreast of what is new. This I see as the major task of the teacher, to provide the means of keeping informed, and an interest in doing so. The school can make or mar a desire or willingness to go on learning; our effectiveness in a rapidly changing world depends on this.

THE INTER-RELATEDNESS OF EVENTS AND THE INCREASING COMPLEXITY OF LIFE

This is the second of my themes which the school must take into account. Two examples should clarify what I have in mind. Climatic factors caused the Russian grain crops to fail and massive quantities of grain had to bought in Canada and USA. Not being participants in the monetary exchange system of the free enterprise economy, Russia could only pay in gold.

This affected the world price of this commodity, reduced the profitability of the South African gold mining industry and hence had some bearing on our balance of payments. Events at first sight of no concern to us indirectly influenced our economy.

My second example. The United States has passed through a crisis of confidence, resulting from their failure in Vietnam, Watergate, corruption in high places, a faltering of the free enterprise system, and doubts about the wisdom of an unlimited growth philosophy. The silent majority looked for a simpler, more compact, more assured way of life, less global involvement, the parish pump rather than the moon. Along comes a relatively unknown man for the presidency, a man from a small town, who had successfully managed a small business, and thereafter ran a relatively small Southern State as Governor. He stood for the older values, the family religion, the Protestant work ethic. The black vote was critical for his election. He had to make certain commitments to it. A tougher policy on events in Southern Africa was an inevitable consequence. This is bound to affect our daily lives. I chose two geopolitical examples. I could have demonstrated the same point with an ecological example, or one concerning the energy crisis and the replacement of oil by nuclear power. It follows that we must acquire the habit of seeing events as interrelated and interdependent. This requires new thinking habits. How can these be taught? We should no longer teach disciplines in watertight compartments. Our approach has to become more holistic.

Some subjects, like geography, are integrative by their very nature. Others, like history, must deliberately be made so. I doubt, however, whether we can get very far without introducing subjects like economics, ecology, psychology and political philosophy in the secondary school. The task of the teacher not only becomes more demanding, but also more exciting when this approach is accepted. It can widen every teacher's horizon, no matter what subject is taught.

CURRENT CHANGES IN SOCIAL AND MORAL VALUES

Societies maintain order through the application of a set of principles and moral values. Some are explicitly embodied in law, others in solemn declarations or religious creeds, but many remain unwritten, enshrined by culture and tradition in the conscience of individuals. They change slowly with time and even revolutionary change is always preceded by a period of ferment which adumbrates the change. Codification generally follows, and rarely initiates. The factors determining change are complex and various. They include economic and sociological circumstances, the impact of war, class conflict, subtle influences related to the rise and fall of civilisations. Historically we can trace changes in value systems as a result of, or as the cause of, for example, the decline and fall of the Roman Empire, the Renaissance, the Reformation, the French Revolution, the first world war and the Russion Revolution. Inevitably, the events of the 20th century to which I have referred, particularly the trauma of two world wars, the impact of technology, the decline of Western imperialism and the rise of communist states have strongly influenced our attitudes and values. Changes have been particularly notable in respect of such values as patriotism, the sanctity of the marriage bond, sexual codes, religious freedom and observances, public morality, minority rights, egalitarianism and concern for individuality. Agencies that are primarily concerned with values are the family, the church, the legal and political institutions and the community through public opinion. But the school must also pay its part, because it is in prolonged contact with young people during their most formative years. The classroom is more than a cognitive learning situation. It can reinforce or supplement the value — educational function of other institutions. Religious instruction and civics are useful means of doing so, provided a holistic approach is followed, and values are presented functionally rather than didactically. The study of literature is an ideal medium. Great literature presents a mirror of everyday life, of the past and of our own. In it, all the problems which life presents to us are acted out by people like and unlike ourselves. Through the imaginative teaching of literature, and also of art, an understanding and appreciation of values can be developed in their functional form. Note again the importance of an interest in reading if this approach is to be effectively used.

PERSONALITY AND CHARACTER CHANGES

This leads directly on to my last theme, the role of the teacher in personality and character development. I have already referred to the possible adverse consequences of the increasing complexity and instability of our social order. I am concerned about the current over emphasis on "doing one's own thing," which so easily deteriorates into licence or lack of concern for others. The maintenance of discipline, which is essential for social order, is becoming increasingly difficult, as dem-

onstrated by classroom violence, especially in Britain. I do not believe individuals can work out their own moral codes, or rely on their peer-groups for guidance. Culture and tradition do not suddenly become irrelevant. Some continuity must be maintained, some conformity must be exacted, if a gradual slide into social chaos is to be avoided.

The school environment, the classroom, the sports fields, extra curricular activities all are real life situations in which social conduct appropriate for our times can be developed. The personal example of the teacher in the establishment of interpersonal relationships, can be of crucial importance.

There was some truth in the saying that the battles of the British army were won on the playing fields of Eton. Their educational system did develop the kind of leadership qualities that were relevant for their times. There is no reason why our schools should not play their part in the establishment of those values that are important for our present and future. A word of advice about the guidance that can be provided by psychology in this task. I believe that psychology misread the role of discipline in the development of character. Discipline applied in an authoritarian or punitive manner can undoubtedly be harmful; but so can the policy of letting the child take full responsibility for its actions before it is mature enough to do so, or to permit free run to desires and impulses without the imposition of some constraints. Psychological theories are too often presented as based on fact when there is no adequate evidence to support such claims. Teachers should be on their guard not to experiment with the fate of people.

THE ROLE OF THE TEACHER

I have sketched a demanding role for the teacher, one that assumes wisdom about people and events and devotion to the task of leading the young to full maturity as persons. In the assumption of this role, the College and the professional training on which you are now embarked can provide the guidelines. How you will utilise these opportunities is your concern. Much depends on one's motivation, and this in turn depends on how one perceives the goal that lies ahead. I trust that my remarks have done something to clarify this goal, and to indicate that for those who have the initiative and courage to accept it as depicted, the preparation for its achievement will prove eminently worthwhile.