

The Hazard Called Education by Joseph Agassi

Essays, Reviews, and Dialogues on
Education from Forty-Five Years

Ronald Swartz and Sheldon Richmond (Eds.)



SensePublishers

The Hazard Called Education by Joseph Agassi

The Hazard Called Education by Joseph Agassi

*Essays, Reviews, and Dialogues on Education
from Forty-Five Years*

Edited by

Ronald Swartz

Sheldon Richmond



SENSE PUBLISHERS
ROTTERDAM/BOSTON/TAIPEI

A C.I.P. record for this book is available from the Library of Congress.

ISBN: 978-94-6209-623-3 (paperback)

ISBN: 978-94-6209-624-0 (hardback)

ISBN: 978-94-6209-626-4 (e-book)

Published by: Sense Publishers,
P.O. Box 21858,
3001 AW Rotterdam,
The Netherlands
<https://www.sensepublishers.com/>

Printed on acid-free paper

All Rights Reserved © 2014 Sense Publishers

No part of this work may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, microfilming, recording or otherwise, without written permission from the Publisher, with the exception of any material supplied specifically for the purpose of being entered and executed on a computer system, for exclusive use by the purchaser of the work.

Joseph Agassi's Dedication

Essays

For Ian Winchester

Ronald Swartz's Dedication

Introduction

For Susan Swartz

With love and thanks for all the support
provided over the last five decades

Sheldon Richmond's Dedication

Afterword

For Marilyn Loshin Richmond and Elken Richmond

The two teachers in my family, my wife and my son

TABLE OF CONTENTS

Acknowledgments	ix
Preface 1 by <i>Joseph Agassi</i>	xi
Preface 2: Towards Creating a Curriculum for Autonomous Learners: An Email Dialogue	xiii
Foreword by <i>Ian Winchester</i>	xv
Introduction to the Hazard Called Education: Towards a Socratic Educational Philosophy by <i>Ronald Swartz</i>	xvii
Part I: Theory	
Chapter 1: Training to Survive the Hazard Called Education	3
Chapter 2: The Autonomous Student	17
Chapter 3: The Myth of the Young Genius	25
Chapter 4: To Reform Higher Education: Towards a Manifesto	37
Chapter 5: The Preaching of John Holt: Discussion of John Holt, The Underachieving School	41
Chapter 6: The Teaching of Critical Thinking: Review of Francis Schragg, Thinking in School and Society	47
Chapter 7: Rituals to Block the Reform of Education, Review of Jerome S. Bruner's, The Process of Education	51
Chapter 8: Top Schools: Review of D. Reynolds, B. Creemers, S. Stringfield, C. Teddlie, and G. Schaffer, eds., World Class Schools	59
Chapter 9: Educating Elites in Democratic Societies: A Dialogue	63
Chapter 10: Letter to Diane: Popper on Learning from Experience	73
Chapter 11: Education for Survival	81
Part II: Application	
Chapter 12: Science Education Without Pressure	91
Chapter 13: Planning for Science and Science Education	107

TABLE OF CONTENTS

Chapter 14: On Mathematics Education: The Lakatosian Revolution	131
Chapter 15: Mathematical Education as Training for Freedom	139
Chapter 16: The Injury of Science Text Books: Review Essay of Michael Matthews, Science Teaching	149
Chapter 17: The Master Relationship: Review of Warwick, Andrew, Masters of Theory	157
Chapter 18: The Future of (Science) Higher Education	169
Part III: Social Criticism	
Chapter 19: University President as Gun-Slinger 1: Academic Democracy Threatened	185
Chapter 20: University President as Gun-Slinger 2: Review of Straight Shooting	197
Chapter 21: Disseminating Education for the Democratic Way of life Now	201
Afterword: Is Agassi Out of Touch with Reality? by <i>Sheldon Richmond</i>	207
Last Word: Instruction by <i>Joseph Agassi</i>	215
Appendix	221

ACKNOWLEDGMENTS

For people familiar with the academic accomplishments of Joseph Agassi it will be readily apparent that the essays in this book are indeed a very small part of Joseph Agassi's published works. Nevertheless, we are grateful that Agassi has devoted some of his writing to commentary on educational problems.

We thank Agassi for his willingness to interact with us about the educational problems suggested in the essays included in this book. Moreover, our collaboration in relationship to the editorial work for this book has provided us with a variety of opportunities to engage in worthwhile discussions about significant educational problems. We hope that these essays will be a catalyst for discussion about worthwhile and important educational problems. Finally, we thank Ian Winchester and Ian Jarvie for the support and encouragement they have provided for this book.

Ronald Swartz
Sheldon Richmond

PREFACE 1

By Joseph Agassi

“If kids had the vote, the world would be a better and a safer place.”

François Truffaut, *Small Change* (1976)

When a teacher sends a child to the headmaster, everybody knows as a matter of course that the child is in the wrong. This is contrary to the law of every civilized country and against commonsense. So this is a common prejudice. It is not the only one of this kind. Inmates of jails and of mental homes are in worse situations. This suggests that schools are total institutions of sorts, that schoolchildren are inmates of sorts: they are victims of the compulsory education laws.

This is not to suggest that the law should be repealed. The need for public care of children is real. So is the need for public provision of minimum education. What should be repealed is the identification of the state’s response to these two needs as if they were one. It stands to reason that the state should use schooling ? the gathering of children in schools ? to serve education. But this does not make the two needs one, much less does it make schooling identical with education. Indeed, ever since compulsory education was enacted the difference between these two stood out as children immune to the education that the state offers were kept in school anyway. Alfred Binet invented then ? about one century ago and less than a century after compulsory education was instated ? his inane technique of measuring intelligence in order to allow the state to offer retarded children special schools that should better answer their needs. Later, under the same inspiration, schools for gifted children were instituted too. Yet most of us remember from our school days classmates whom teachers considered beyond education. It would be easier for them and for the system if they were exempt from education even though not from compulsory schooling.

To repeat, both the need for schooling and the need for education are not contested; only their identification is. The frontal class that was instated in compulsory schools as a matter of course proved very inefficient yet it persists for obvious reasons that have nothing to do with education ? since no one denies that better education require smaller classes, at times classes of one pupil each. Nevertheless, the question stands: (under reasonable conditions) what should education comprise? More important, **who should decide on this, the authorities, the teacher, the pupil, or a mix of these options? This, I suggest, is the most important question in the study of education.** And the received view is that education should be imposed, partly by the authorities and partly by the teacher. Only because by the received view both schooling and education are compulsory that it unifies the two. I speak here against compulsory education but not against compulsory schooling. This suffices for raising problems of discipline.

The problem of discipline that I started with has dropped out of the discussion, because the imposition of schooling is not in the hand of the school, only the

imposition of the rules of proper conduct in it are. And proper conduct relates mainly with education and marginally with schooling. Rendering education less compulsory, reduces the problems of discipline. I started this discussion with discipline as it displays the defect of the current system of education most severely and in all of its aspects. They all display the lack of respect for the young. The most obvious aspect of this disrespect is the absence of participation in decisions that pertain to them: they have no vote and so cannot influence legislation; and they live in a regime imposed by schools – authorities and by teachers.

This brings me to the end of this discussion that should serve as a preface to the book of essays that my loyal former students Ronald Swartz and Sheldon Richmond have prepared. I conclude this with reference to two thinkers whom I admire, Albert Einstein and Janusz Korczak. Einstein said, the reform of education is very easy: all it needs is to take power away from teachers. How? Korczak answered this: by instituting democratic institutions in school that should make and impose rules that pertain to life in school.

This attitude, of Einstein, Korczak and Francois Truffaut, meets with a very commonsensical objection: children are obviously not competent for self-governing. This objection is valid as it follows from a valid objection to democracy at large. It is the key objection to democracy, indeed: the average citizen, Plato said, is not competent for self-governing. There is one answer to this objection: Plato's Philosopher-King is likewise not competent for governing; nobody is.

To this one may add the powerful argument for democracy that Benedict Spinoza has offered: the democratic process has a tremendous educational value. But the most powerful argument ever is due to Korczak: children have the right for respect and the educational systems violate this right persistently and systematically. Before sanctioning any violation of the demand for respect for children as necessary, we should try to do without it. Only when we have failed to find means for protection of the right of children to respect may we tentatively make rules that violate it. And even then we should never stop trying to do without such laws. History shows that many rules that were supposed necessary have been proved to be unnecessary obstacles. The removal of obstacles on the road to educational reforms is what we should be after.

PREFACE 2: TOWARDS CREATING A CURRICULUM FOR AUTONOMOUS LEARNERS: AN EMAIL DIALOGUE

*By Ronald Swartz and Joseph Agassi
(Edited By Sheldon Richmond)*

[Joseph Agassi is known primarily among fellow academics as an exemplary historian and philosopher of science; an ardent critic and disciple of Karl Popper; a critical admirer of the work of Michael Polanyi; and a Socratic fly with the “sting of a bee” for all those who wear the intellectual fashions of the day. To most of Agassi’s students he is known primarily as an exemplary model of the Socratic teacher. The immediate question is: How do we make ready our educational institutions for more Socratic teachers? The philosophical or theoretical question is: Why do we want Socratic teachers? The email dialogue between Ronald Swartz and Agassi below outlines Agassi’s answer to those questions: authoritarianism (or anti-democracy) blocks the democratic reform of educational institutions where Socratic teaching is not poisoned; and, Socratic teaching is the main anti-dote to authoritarianism. The removal of authoritarianism from education also removes the hazard that education has become to students; to their happiness, creativity, and dignity as autonomous individuals. Sheldon Richmond]

First Email

Date: Sat 16 Jun 06:01:00 EDT 2007

From: Joseph Agassi

Subject: creationism

Dear Dr. _____ [name removed]

I have long ago despaired of having my voice on creationism heard. But you may change my attitude. It seems to me a shame that scientists advocate any doctrine – any doctrine whatsoever.

Were schools, in the USA or the UK or anywhere else, to teach science critically, they would teach it historically, and when teaching biology they might begin with the ancient lore, distinguish between it as faith and as cognitive, offer the historical version of the criticism of its cognitive version, and move on, via the creationism of Lyell and the evolutionism of Darwin to today’s controversy – both in biology and in metaphysics – and ask if it has any of the political corollaries that creationists imply that creationism has.

This would leave no place whatever for the current strife over intelligent design and similar nonsense that dogmatic science teaching unwittingly encourages. This

should appeal to all honest individuals who partake in the dispute. And it need not be above the comprehension of the high-school population as the current dispute is.

.....[second email removed]

Third Email

Date: Tue 26 Jun 10:23:02 EOT 2007

From: Swartz

Subject: Re: creationism and other stuff To: Agassi

Dear Joseph, I am once again at the end of a semester. And at this moment I am in the middle of a paper grading session. Given this state of affairs I have decided to take a break from grading to see if I can do something a little bit more interesting.

In relationship to your email about “creationism” you seem to be saying the same thing that you said at the end of your paper on Bruner’s “The Process of Education” (I think the paper is called “Rituals to Block Educational Reform”). Also, in the paper I wrote about your ed. phil. there is a quote from your “Gentle Art of...” which also refers to the creationism teaching issue.

In relationship to your ideas about the teaching of creationism I do not ever remembering reading about how you might answer a question such as “Do all students who attend schools need to study questions such as “What have people said about the development of life?”? My guess is that you would answer this question with a “No.” Is this guess correct?

Must be leaving you now. I need to once again try to return to the grading of papers. All the best, Ron

Fourth Email

Date: Tue 26 Jun 15:52:23 EOT 2007

From: Agassi

RE: creationism and other stuff To: Swartz

Dear Ron,

Your guess is right. I am for compulsory schooling, but not for compulsory instruction except for what is proved essential for the community (mainly reading and writing). You are also right saying that I repeat myself. Not much new to say. Yet, if compulsory instruction is on, let it be non-authoritarian, namely, historical. In my book authoritarian science is worse than authoritarian religion. Possibly instruction in science is of greater import than instruction in religion. But this is a different matter. What is so objectionable is the combination of an opposition to authoritarian religion as authoritarian coupled with an authoritarian imposition of science as science.

Best, Joseph

FOREWORD

By Ian Winchester

To my continuing delight Joseph Agassi has been a part of my social and intellectual life since the early 1980s when I encouraged one of my successful doctoral students, Sharon Bailin, to take her post-doc with him at York University in Toronto where he was then teaching. Joseph soon joined the editorial board of *Interchange: A Quarterly Review of Education* which I had begun to edit in 1982 where he contributed regularly in face-to-face meetings with the other board members, many of whom were doctoral students, in his delightfully honest and forceful manner.

One of Joseph's peeves at that time was that his educational ideas were largely ignored by editors of educational journals. Official education and its hangers on is a very conservative affair harking back to the Greeks and Romans, the early days of the University of Paris and the attempt to organize the people for the needs of the industrial revolution which arrived with great force in England in the seventeenth century. Joseph's approach to educational conservatism is to attack it at its strongest points showing that the present suppositions are often groundless. He is never dismissive but he does not take idols as sacrosanct. Joseph's iconoclastic approach was just what I thought was needed. The result from my point of view was a number of powerful critiques of contemporary educationalists, educational writers and their books as well as a number of articles written by Joseph in his forceful and insightful style that *Interchange* was happy to publish.

One of the results of the attempts to re-think the conservatism of official education in the developed world since the 1960s was a series of attacks on it as the wicked and thoughtless establishment, browbeating young people into meaningless education determined by their elders to no apparent point. These attacks were often on such things as the teaching of mathematics, of reading and on the approach to education generally that involved teachers standing in front of classes telling children what it was that they ought to know and how they ought to know it. Such attacks resulted in the "new math" which confused a whole generation and the Chinese-like "whole word" approach to reading that led to so many never learning to read at all. This approach also led rather quickly to the notion, based on the obviously true observation, that children learn by themselves and so ought to be encouraged to do so. This was interpreted to mean that the teacher's role was to be that of, at best, a guide on the side or indeed dispensable if matters were arranged appropriately for the child to learn by her or himself or perhaps using the then new computer technology. I recall asking Joseph Agassi what he thought about this approach that included children working, perhaps with computers towards individualized learning, dispensing with "the teacher" on the assumption that children learn by themselves. He remarked: "Of course children learn by themselves. But with the indispensable

FOREWORD

aid of a teacher”. That sort of incisive remark seems to me to be the essence of Joseph’s educational thought. For his thought, though analytic and critical, is ultimately synthetic. He is not one who is dismissive of earlier thought but one who often sees what it presupposes and who brings together apparently disparate thought and shows how it can work to a common end.

There are very few important writers on educational topics that have gained fame in other fields. Bertrand Russell and his colleague Alfred North Whitehead, who were path-breaking mathematical logicians as well as philosophers come to mind. Joseph Agassi, a formidable philosopher and historian of science is to be reckoned among their rare number.

Let me offer a very recent anecdote that tells a lot about what manner of a man Joseph Agassi is. The world wide Wiki International Dictionary of Intellectual Historians project has listed 78 Historians of Science with names like A.C.Crombie of Oxford and Thomas Kuhn of Princeton among whose number Joseph Agassi is also reckoned. On this Agassi has remarked:

“Though this merits some bragging, since some of my friends complain that my fame is too small. It is excessive.” Humility is a rare quality among educators, even rarer than fame outside of one’s central field. Joseph Agassi is also to be numbered among the those possessing that rare quality.

I commend his writings on education to all who have an genuine interest in the improvement of our educational arrangements and of our thinking well about them.

Ian Winchester,
Editor, Interchange: A Quarterly Review of Education
Calgary, Canada

INTRODUCTION TO THE HAZARD CALLED EDUCATION: TOWARDS A SOCRATIC EDUCATIONAL PHILOSOPHY

BY RONALD SWARTZ

OUTLINE FOR TOWARDS A SOCRATIC EDUCATIONAL PHILOSOPHY

- I. Preliminary Remarks about the Educational Problem of Avoiding Avoidable Suffering
- II. Traditional Education and Its Possible Contribution to Some Students' Suicides
- III. On Boredom and Bewilderment in Traditional Educational Programs
- IV. Science as a Race-Course where Education Becomes a Means for Trying to Win Prizes
- V. Thoughts about My Early Encounters with Agassi
- VI. Socrates on Wisdom
- VII. On the Myth of the Subject
- VIII. Against Intellectual Tyranny in Schools
- IX. Science Education as the Acceptance of the Ruling Dogma of the Day
- X. Remembering the Educational Work of Homer Lane and A.S. Neill
- XI. Agassi Remembers Homer Lane
- XII. John Dewey and Alan Ryan on Summerhill Style Schools
- XIII. The Socrates of the *Apology* as an Unconventional Teacher
- XIV. Concluding Remarks about Educational Problems

Plato's demand that the wise man should rule – the possessor of truth . . . raises, of course, the problem of selecting and educating the rulers . . . the tendency to burden educational institutions, with the impossible task of selecting the best . . . transforms our educational system into a race-course . . . Instead of encouraging the student to devote himself to his studies for the sake of studying, instead of encouraging in him a real love for his subject and for inquiry, he is encouraged to acquire only such knowledge as is serviceable in getting him over the hurdles which he must clear for the sake of his advancement. . . It has been said, only too truly, that Plato was the inventor of both our secondary schools, and our universities. I do not know a better argument for an optimistic view of mankind, no better proof of their indestructible love for the truth and

decency, of their originality and stubbornness and health, than the fact that this devastating system of education has not utterly ruined them. In spite of the treachery of so many of their leaders, there are quite a number, old as well as young, who are decent, and intelligent, and devoted to their task.¹

Karl Popper

Popperian *critical fallibilism* The new central question, *How do you improve your guesses?* will give enough work for philosophers for centuries; and how to live, act, fight, die when one is left with guesses only, will give more than enough work for future political philosophers and educationalists.²

Imre Lakatos

I. PRELIMINARY REMARKS ABOUT THE EDUCATIONAL PROBLEM OF AVOIDING AVOIDABLE SUFFERING

A major problem that seems to be at the heart of the educational writings of Joseph Agassi can be formulated by the following question: How can people learn to avoid some of the avoidable suffering that is now being created in educational programs that have their historical roots in monumental works such as Plato's *Republic* and *The Laws*? This question can be called the educational problem of avoiding avoidable suffering. Moreover, this question can be seen as an outgrowth of ideas suggested by Karl Popper in his *The Open Society and Its Enemies*; in the 1950 Preface to the Second Edition to this book Popper notes the following:

. . . our greatest troubles spring from something that is as admirable and sound as it is dangerous – from our impatience to better the lot of our fellows. For these troubles are the byproduct of what is perhaps the greatest of all moral and spiritual revolutions of history, a movement which began three centuries ago. It is the longing of uncounted unknown men to free themselves and their minds from the tutelage of authority and prejudice It is their unwillingness to sit back and leave the entire responsibility for ruling the world to human or superhuman authority, and their readiness to share the burden of responsibility for avoidable suffering and to work for its avoidance.³

For people familiar with the academic writings of Agassi, it will come as no surprise that I have begun this essay with an account of Popper's views on avoiding avoidable suffering; since completing his Ph.D. dissertation under Popper's supervision in the 1950's, Agassi has created an immense amount of written material that often attempts to both criticize and perhaps even improve upon some of Popper's ideas. Nevertheless, when all is said and done it does appear to be the case that Agassi's academic work can be viewed as part of the critical rationalist intellectual tradition that Popper tried to develop for people living in the twentieth century. Both Popper

and Agassi see Socrates as he is described in Plato's *Apology* as an ancient example of a critical rationalist. And although Popper and Agassi do not totally agree with one another about how the Socrates of the *Apology* applied insights that are part of the critical rationalist tradition, it does seem to be the case that both Popper and Agassi wish to identify their work with the Socrates that Plato has portrayed in his *Apology*.

Briefly stated, throughout this introduction I will assume that Agassi's educational writings have been significantly impacted by a Popperian approach to problems. Moreover, Agassi's contributions to understanding the importance of problems such as the educational problem of avoiding avoidable suffering can be seen as one significant example of Popper's influence on Agassi's efforts to help develop and articulate central aspects of Socratic liberal democratic self-governing educational philosophies that value the autonomy of all human beings.

II. TRADITIONAL EDUCATION AND ITS POSSIBLE CONTRIBUTION TO SOME STUDENTS' SUICIDES

Later in this introduction I plan to provide some commentary about how Popper and Agassi disagree with one another about possible ways to integrate Socratic insights into an educational program. At this time I would like to say a few words about some important educational problems that are hinted at in Agassi's writings. Specifically, in his book *A Philosophical Apprentice: In Karl Popper's Workshop* Agassi provides commentary about how traditional educational ideas might be connected with a student committing suicide; in a discussion about the suicide of a student Agassi has suggested the following:

. . . whenever the traditional code of education leads to suicide, rather than blame it and then attempt to alter it and prevent further suicides, as we should, we traditionally and systematically and hypocritically and cowardly blame some stringent application of the traditional code by too strict a Father or too strict a father substitute, and blame that on some excessively harsh attitude – at least for the case of a tragic suicide that proves in retrospect to have been a case of an unusually sensitive individual who had merited exceptionally gentle treatment but due to some regrettable oversight received too large a dose of discipline. (This is crocodile tears: regretting the damage and blaming an accident or a scapegoat or anything else just in order to prevent blaming the system and thus blocking all attempts at its improvement.)⁴

Since coming in contact with the above views related to the possible connection between traditional education and a student's suicide I have often thought about questions such as the following: 1) Does the traditional code of education at times contribute to the suicide of some students? 2) If we accept that the traditional code does at times contribute to suicide do many educators hypocritically and cowardly blame some stringent application of the traditional code? 3) Do educators often

blame tragic student suicides on accidents or scapegoats in order to block any attempt at improving traditional education? These three questions can be seen as an outgrowth of Agassi's brief comments about a possible connection between the traditional educational code and suicide.

For Agassi, the above three questions have affirmative answers. On the other hand, many educators might find Agassi's comments about the traditional educational code and suicide to be quite offensive, poorly argued for, and totally misguided about what happens when there is indeed a tragic student suicide. In particular, the claim that educational leaders are at times cowards and hypocrites is stated by Agassi as an "obvious fact" that a person can investigate for him or herself. And Agassi's suggestion that those in charge of our educational institutions often block reform by blaming "an accident or a scapegoat" can be viewed as a provocative conjecture that many people may find as nothing more than the tirade of a crank educational reformer who is not serious about making a serious contribution to understanding and perhaps helping to prevent suicides by students.

For reasons that are indeed difficult for me to explain I find it extremely difficult to dismiss Agassi as a crank who has little to say about important educational issues such as preventing the suicides of students. As I see matters, Agassi does indeed at times overstate a case. Specifically, those in charge of our educational system should not always be viewed as hypocrites and cowards when dealing with a student's suicide, but instead some educational leaders are at these times courageous individuals who sincerely believe that a student's suicide has little or nothing to do with the traditional code. And those who want to preserve all that they view as of value in the traditional code are at times sincere advocates for what Agassi considers to be a highly flawed view of what should be considered as a good or adequate educational program.

III. ON BOREDOM AND BEWILDERMENT IN TRADITIONAL EDUCATIONAL PROGRAMS

Agassi does indeed at times over generalize when he makes provocative statements such as "we hypocritically and cowardly blame some stringent application of the traditional code." As I see matters, Agassi's message could often be taken more seriously if he would use qualifications such as "at times" or "many" or "some." Nevertheless, in spite of his shortcomings as a communicator, I find I have much sympathy with his overall desire to make some kind of effort to perhaps help some people understand that our present way of educating many individuals from kindergarten to post-graduate work is indeed causing a great deal of harm and suffering to many students. That is, as Agassi sees matters,

Students from elementary school to graduate school all over the world suffer from two very painful complaints. One is boredom. The other is bewilderment, or a sense of being lost, or a sense of inadequacy, or even an incomprehensible

but profound sense of failure, often tainted with a sense of guilt, and, in severe cases, of despair. It is difficult to say which complaint is more painful, that of boredom or that of bewilderment. Fortunately, if we attack the student's sense of boredom *intelligently* (by which I mean while enlisting his cooperation), his sense of bewilderment will disappear or diminish at once. By enlisting his cooperation, we let him know that the inadequacy and failure are those of the general educational system, that he need not feel lost or guilty or desperate.⁵

The case of the traditional code making some kind of contribution to a student's suicide should be viewed as an extreme example of how an authoritarian educational system might do harm to a student. For large numbers of students who do not commit suicide the pain of boredom and the suffering associated with a sense of being a failure can and should be viewed as unnecessary, undesirable, and unintended consequences of well-meaning educational authorities who unthinkingly think that a great deal of pressure to perform in an excellent or outstanding manner will help all students "be all that they can be." In other words, zealot educational authorities who pressure students of all ages to learn large amounts of information that has been included in the prescribed curriculum are often unaware of the harm they may be causing those students who do not respond well to a pressure packed learning situation. And the pain and suffering that our traditional educational system unintentionally causes oh so many students often goes unnoticed by zealot educational authorities who think they are doing what is good for their students.

What needs to be emphasized from the above is that a traditional authoritarian educational program is very likely to cause many students much unnecessary and avoidable pain and suffering that is difficult to endure. And what I find so interesting and important about Agassi's educational writings is that he wishes to find ways to reduce and perhaps eliminate some of the pain and suffering that many students of all ages experience during their years in conventional educational programs which give educational authorities far too much power to dictate what students must do in order to be viewed as successful or outstanding individuals.

The above brief commentary on Agassi's educational views can be seen as an adequate introduction to a few of Agassi's educational essays. Those who have read much of what I have written here could easily leave this introduction now in order to read one of Agassi's essays that I have selected for this book. I would recommend trying to start with his "Training to Survive the Hazard Called Education." Moreover, if this essay does not work for you, then try "The Preaching of John Holt," "The Myth of the Young Genius," "Letter to Diane: Popper on Learning from Experience," or "Science Education without Pressure." Also, going to the Table of Contents of this book may help a person discover an essay that will suggest an interesting educational problem. And, finally, if you find that the essays are not for you at this time you should consider returning to this introduction or going to Agassi's home page on the internet where there are copies of some of his published essays.

INTRODUCTION TO THE HAZARD CALLED EDUCATION

Years ago I had the dream of writing an introduction to some of Agassi's educational essays. This dream became a reality when I completed an early version of this introduction which was eventually published as an article called "Revisiting Joseph Agassi's Philosophy of Education." The published version of my first introduction to Agassi's educational views was an edited and much reduced version of the paper I had written. My original paper was reduced by at least one-third because the journal which wished to publish my essay had length limitations which my original paper exceeded. The original version of my first introduction to Agassi's educational ideas has been integrated into this introduction. And my hope is that the editor of the series which this book will hopefully join will decide that what I have written here is indeed an adequate new introduction to Agassi's efforts to suggest ways in which education at all levels of learning might be improved.

IV. SCIENCE AS A RACE-COURSE WHERE EDUCATION BECOMES A MEANS FOR TRYING TO WIN PRIZES

A major reason I am willing to continue to spend time writing about the educational problems that Agassi has either hinted at or explicitly stated is because he has consistently written about the need to change and perhaps improve traditional educational programs that dominate learning situations in Western societies. Throughout Agassi's voluminous academic writings there is the recognition that normal authoritarian educational programs that exist in most Western societies have their historical roots in works such as Plato's *Republic* and *The Laws*. And Agassi has attempted to criticize the contemporary manifestations of Plato's views of the teacher as a benevolent slave-driver who is given a great deal of power to control how students behave. In particular, in order to understand how Agassi has attempted to criticize a modern manifestation of a Platonic teacher, it is worthwhile to note that he once wrote the following:

. . . we can educate the young to increase or decrease their moral autonomy and economic resourcefulness. And we must notice that an ambitious research scientist today is likely to be an educator, and if he knows what he wants he can do the routine part of his educational job fairly perfunctorily while screening from the scores of students he meets every semester no more than one or two, train them as his assistants while getting them adequate grants . . . in a few years he can develop a powerful research team, direct them with a sure hand, and make a place for himself and them in his specialized community, perhaps even win a Nobel Prize and share with them its emotional and economic fringe benefits. Usually the achievement of such a researcher, if he has one, is a benefit to mankind; yet the cost of this achievement is such that I do not hesitate to call the Swedish Academy the unwilling Moloch which absent-mindedly devours innocent youths in many universities the globe over: for the training they receive is for the absence of both moral and economic autonomy which they trade for careers.

The problem, then, is in part educational, especially since the Nobel Prize winning slave-driver is often an educator taken as an educational model.⁶

Is it often the case that those who compete for Nobel Prizes are slave-driving teachers who are role models for other teachers? Do such teachers give their students careers in place of moral and economic autonomy? Should moral and economic autonomy be goals of education? Is the Swedish Academy an unwilling Moloch which absent-mindedly devours innocent youths in many universities throughout the world? Does the quest for Nobel Prizes perhaps corrupt the teaching of science? Questions such as these are clearly an outgrowth of Agassi's views on science education at universities. And as with his views on student suicide I cannot easily dismiss these questions. On the contrary, one reason I keep my pen moving at this moment is because I am trying to see if it is possible to find out if others think that the above questions are worthy of discussion.

Agassi is not an easy writer to read. And over the years I have tried to read some of his works I have slowly come to realize that for me the best way to read Agassi is to skip around and look for some interesting passage to read. I rarely read an Agassi book or paper from beginning to end (the exceptions to this are most of the essays in this book which I have read from beginning to end a number of times). When I usually read an Agassi essay or book my goal is to see if he has something of value to say about a question I find to be interesting. Moreover, I have found that the part of Agassi's work that interests me the most are the questions suggested about educational issues. For example, years ago when I began to read both Popper and Agassi I decided to write about issues related to viewing teachers, school administrators, and other so-called educational experts as reliable authorities who should control what students learn during their time in school; one paper I wrote about educational authorities is called "Toward a Liberal View of Educational Authorities." This paper clearly demonstrates that teachers who are slave-drivers in the tradition of Plato need to have their power significantly checked and diminished. Now is not the time to discuss my above mentioned paper in detail, but its conclusion that educational authorities need to be viewed as fallible and in need of serious ways to check their power and influence over students should be mentioned here.

V. THOUGHTS ABOUT MY EARLY ENCOUNTERS WITH AGASSI

In many ways the essays I have written about educational issues have been an outgrowth of trying to understand problems or questions that have been either explicitly or implicitly suggested by the works of Popper and Agassi; in the fall of 1964 when I was a very disillusioned nineteen year old second year undergraduate student at the Urbana campus of the University of Illinois I had a chance encounter with Agassi when he was a philosophy professor at the U of I. My early encounters with Agassi primarily revolved around questions and issues related to my own education. As it turns out, I was one of those students who was both bored and

bewildered about what was going on in my own education. However, I did have a sense that something was wrong with my education partly because I had to cram so much information into my head; the information I was asked to “learn” (or better memorize) rarely was of interest to me and I did not understand why I was expected to learn so much that was not of use to me. However, as a young student trying to “make it” in the world I knew that I needed a college education to get a good job. Thus, as with many other students, I thought that there was something that I was doing that was wrong. And when I would complain to many of my teachers about the possibility that I was asked to learn too much in too short of a time span, I was often told that the problem was with me. That is, I was often told that I was lazy and needed to learn how to discipline myself to work harder. I now remember that one teacher asked me the question “How much television do you watch in a week? How many hours do you drink beer?” Whatever my answer was the teacher said that I spent too much time wasting my time. And the kind professor of my youth who wished to help me suggested that I change my study habits. That is, it was recommended that I put more time into studying and less time with activities that were not valued by my teachers.

Given the above state of affairs I was the kind of student who needed a little training in how to avoid the hazard called education. And what was so unusual about Agassi is that he was not only willing to talk with me about my concerns, but he took my complaints about my education seriously. And Agassi tried, as best as he could, to help me learn to neutralize and diminish the pressure that was being put on me by the educational system and my drive to be successful in the eyes of those like my professors and parents who were considered to be much wiser than me. One thing I now have a vague memory of hearing from Agassi is that much of the pressure I was feeling was being caused not only by people such as my teachers, parents, and friends, but in many ways I was the cause of the pressure that I felt to be so great. And Agassi helped me to see that perhaps, just perhaps, success was not that important. What was important was not something Agassi was willing to tell me because he clearly communicated to me that it was my job, or better my decision, to determine what was important. In other words, Agassi was not willing to tell me what I should do with my life because he thinks that everyone should figure out for him or herself what is important. Nevertheless, from what I now recall from early conversations with Agassi, the issue of being a social success was indeed a major topic of discussion. And when it came to my own education Agassi helped me see that if I failed to succeed in school the world would not come to an end. And Agassi helped me see that to be a failure was not that big of a deal.

As I now look back on my early conversations with Agassi I can see that he helped me see that I had a choice where I did not see a choice. The choice I had was to become a success or to become a failure. Now, Agassi did not say I should become a failure, or that I should try to fail, but he did make it clear to me (or at least that is what I now think) that being successful was not the only thing that mattered. Moreover, Agassi helped me see that much of the pressure I was putting

on myself could be significantly diminished if I did not work so hard for success as others defined it. And I now think that a major message Agassi tried to communicate to the young Swartz was something like the following: Just try to do your best to find something that is interesting and worthwhile to do. What this interesting and worthwhile thing should be, and how it would fit into my efforts to be successful as a student at the University of Illinois was not an easy thing for me to figure out, but I was determined to reduce the amount of pressure I was causing myself to be successful in school. And, finally, I should note here that at the conclusion of one of my early conversations with Agassi he recommended that I read a book called *The Open Society and Its Enemies*.

It is extremely difficult for me now to recall when I decided that it would be a good idea to read Popper's *Open Society*. However, I do remember that my conversations with Agassi were so interesting that I decided I wanted to have more conversations with him about my own education. And as I now look back at my early encounters with Joseph (I now usually call Agassi by his first name when I speak or write to him) I am able to see that what was so interesting about these encounters is that there was a sense of give and take. In other works, although Agassi did not agree with much of what I was saying about life and schooling, it did appear that he understood or heard what I was saying. And Agassi's comments about what I thought appeared to me to be relevant to what I was saying. In other words, Agassi was an excellent listener and critic of views that I seemed to advocate. And Agassi helped me see that perhaps, just perhaps, I needed to rethink or even change what I thought.

Let me now provide examples of what I view as models of some of my early dialogues with Agassi:

First Dialogue:

Swartz: I really do not like to read and write. I only do these things when I have to.

Agassi: Perhaps you have been taught to hate reading and writing because of the pressure put on you to do these activities? Is there something you like to do?

Swartz: I like to go to movies.

Agassi: How do you think you would feel about movies if you were forced to go to the movies everyday of your life?

Second Dialogue:

Swartz: Personal freedom is a great thing, but most of what we do is determined by circumstances beyond our control.

Agassi: I agree that much of life is determined by circumstance outside our control. But even if 99% of what we do is determined by things which we do not control, I think that what matters is what a person does with his 1% of control. In fact, I judge a person by how well he or she uses their 1%.

Now I cannot say that the two dialogues I have recalled in the above accurately describe what Agassi and I said to one another well over four decades ago. But I can safely say that I do recall that Agassi challenged me to rethink what I thought I thought. That is, Agassi was able to get through my thick skull that there was a possibility that I did not have an adequate view of things such as reading, writing, and my own ability to impact my own life. And, although my discussions with Agassi made it quite clear to me that I was not totally free to do as I pleased, I did start to wonder whether or not I was making good use of what little freedom I had. And even today, and even as I now write this sentence, I am wondering am I using what little freedom I have in a worthwhile way.

VI. SOCRATES ON WISDOM

Looking back at my early dialogues with Agassi helps me now see that much of Agassi's educational philosophy can and should be viewed as attempts to create and be a part of a Socratic educational workshop where people interact with one another to solve problems that they consider to be interesting and worthwhile to study. My early encounters with Agassi were about questions such as "Why do I hate to read and write?" and "Am I free to make choices about how I live my life?" These questions were not as clearly stated as I have stated them here, but they were in the background of my early dialogues with Agassi. Also, at times Agassi would ask me to please tell him what question I wanted to discuss. And Agassi would often try to explain to me how my question had different answers that perhaps needed to be looked into. And almost always there was a book or two that he would recommend that I look at. One book that Agassi recommended a number of times was Popper's *Open Society*.

Once I started to read the *Open Society* (I think it was in the late part of 1964 or the early months of 1965) I was somewhat surprised by the fact that I thought I understood much of what Popper was saying in this book. To be sure, the names of the people Popper was writing about were often strange indeed, but what Popper said about the strange people was understandable. And when Popper introduced me to a guy by the name of Socrates, I found a teacher who I really liked. And it was Socrates as he is described in the *Apology* that fascinated me so. Specifically, I liked Socrates' solution to the question "Who are the people who have wisdom?" And once I saw that there was a debate about how to answer this question I readily became aware of the fact that I disagreed with most of my teachers and elders about who should be counted among those who are wise.

Popper and Agassi introduced me to the Socratic idea that wise people are not the people who think that they possess valuable or true ideas. On the contrary, what Socrates teaches is that wise people are those individuals who recognize that their "wisdom is really worth nothing at all."⁷ And for one of the best English translations of the way Socrates discovered his answer to the question, "Who are the people who have wisdom?" we need only recall that in the famous Benjamin Jowett translation of the *Apology* that Socrates is credited with saying the following:

O Man of Athens, I must beg you not to interrupt me, even if I seem to say something extravagant. For the word which I will speak is not mine. I will refer you to a wisdom who is worthy of credit, and will tell you about my wisdom – whether I have any, and of what sort – and that witness shall be the God of Delphi. You must have known Chaerephon; he was early a friend of mine . . . Chaerephon, as you know, was very impetuous in all his doings, and he went to Delphi and boldly asked the oracle to tell him whether – as I was saying, I must beg you not to interrupt – he asked the oracle to tell him whether there was any one wiser than I was, and the Python prophetess answered, that there was no man wiser. . . . When I heard the answer, I said to myself, What can the god mean? . . . After long consideration, I at last thought of a method of trying the question . . . Accordingly I went to one who had the reputation of wisdom . . . the result was as follows: When I began to talk with him, I could not help thinking that he was not really wise, although he was thought wise by many, and wiser still by himself. . . . I went to one man after another, being not unconscious of the enmity which I provoked. . . . my investigation has led me to having many enemies of the worst and most dangerous kind . . . And I am called wise, for my hearers always imagine that I myself possess the wisdom which I find wanting in others: but the truth is, O men of Athens, that God only is wise; and in this oracle he means to say that the wisdom of men is little or nothing; he is not speaking of Socrates he is only using my name as an illustration, as if he said, He, O men, is the wisest who, like Socrates, knows that his wisdom is in truth worth nothing.⁸

The Socratic view of wisdom is indeed difficult to understand partly because it is such an abstract idea. And it is difficult to explain why the Socratic view about who is a wise person is better than the traditional view which says that wise people know important information, valuable knowledge, or even the truth. Nevertheless, as I understand them, both Popper and Agassi view themselves as modern day disciples of Socrates as he is portrayed in Plato's *Apology*. And In order to see how Agassi has attempted to integrate a Socratic view of wisdom into the way he interacts with his colleagues and students he has tried to create learning situations which are a part of what he calls a workshop. That is, in their paper "The Rationality of Dogmatism" Agassi and his co-author Ian Jarvie have noted the following:

A workshop is a place where people undertake collaborative endeavor to try to work something out. In the course of this they may employ all and any strategies to hand: try-outs, explorations, episodes of debate, closing questions, opening others, models, cobbling together makeshift compromises; the lot, There may be vestigial structures of teacher and student, but these too may come and go. The apprentice can easily become more adept at a move than his master, the master can accept the strategy suggested by the apprentice. Rationality for us, then, is what is hinted at in Plato's early dialogues, but which seem actually to have been practiced by the historical Socrates. Plato in many dialogues inadvertently points at "Socrates" who knows the answer

before he starts, rather than the more plausible figure of the early dialogues who pursues inquiry in a genuine spirit of open-mindedness and workshop rationality. We suggest that it was the workshop atmosphere Socrates created that attracted pupils; if he had been the kind of teacher the late dialogues of Plato painted him to be he would not have come down to us as he has.⁹

Once again I have the desire to recommend to anyone who has read much of this essay to now try to read one of the Agassi essays I have collected in this hoped for book. But if I still have the attention of a person other than myself I am indeed delighted about this. In other words, I think anyone who has read most of what I have written here has more than enough information to leave me for an Agassi read. However, I still have a lot more to say about the Socratic educational reform movement that both Popper and Agassi have tried to support in their academic written work, their work as teachers in a classroom, their public speaking engagements, and their interviews and essays that were published in books, journals, and newspapers.

VII. ON THE MYTH OF THE SUBJECT

Years ago I had the dream of interviewing Popper, Thomas Kuhn, and Paul Feyerabend for a book which was to be called something like the following: *Philosophers of Science Discuss Educational Problems*. This book never became a reality, but I was able to have a correspondence with Popper, Kuhn and Feyerabend. My correspondence with these men encouraged me to try to interview other academics whose work dealt with interesting and important educational problems; and two individuals I did eventually interview were Thomas Szasz and Joseph Agassi. The Agassi interview was published as an article in an academic journal. Moreover, the published version of this article will hopefully be included in this book of Agassi educational essays. And, finally, at this time I will not say much about this interview except that its title is “Educating Elites in Democratic Societies: A Dialogue.”

My major reason for writing about my interest in interviewing scholars about possible educational problems hinted at in their works is because I wish to discuss an idea that Popper and Agassi seem to either endorse or argue for in their work. This idea is what Popper has labeled the “myth of the subject.” Specifically, it needs to be noted that the “myth of the subject” clearly suggests that in our modern world educational programs for people of all ages misrepresent human knowledge when they teach it as bodies of information. That is, for Popper

Subject matters in general do not exist. There are no subject matters; no branches of learning – or rather, of inquiry; there are only problems, and the urge to solve them. A science such as biology or chemistry, (or say physical chemistry, or electrochemistry) is, I contend, merely an administrative unit. University administrators have a difficult job anyway, and it is a great convenience to them to work on the assumption that there are some named subjects, with chairs attached to them to be filled by the experts in these subjects. It has been

said that the subjects are also a convenience to the student. I do not agree; even serious students are misled by the myth of the subject. And I should be reluctant to call anything that misleads a person a convenience to that person.¹⁰

Popper's notion of "the myth of the subject" can be viewed as an idea that has far reaching consequences for the way learning is organized in educational programs. At this time I do not wish to say much about the immense implications of rejecting the idea that distinct academic disciplines do not really exist. What I do wish to note here is that Popper has offered a view of human knowledge that is rooted in the idea that problems or questions are at the heart of the human effort to learn and acquire information about the world in which we live. For Popper, human inquiry can always be seen as an attempt to solve a problem or answer a question. Of course, Popper allows for the idea that at times people may be confused, unaware, or mistaken about the problem or question they are interested in. And Popper's views on problems incorporate the notion that one person may be mistaken about what problem or question interests another person. And, finally, Popper does not consider all questions to be of the same value or worth. For Popper and those who have been influenced by him it is possible for people to discuss their questions and perhaps even at times agree that some questions are more worthy of consideration than others.

Questions and problems are at the heart of Popper's view of human knowledge. And any question can be viewed as a problem which might be worthy to discuss and solve. In a similar sense, any problem can be formulated as a question which people may wish to seek answers. But whatever the case, problems and questions are a central part of human inquiry for Popper; in order to understand how Popper's work and life incorporated problems, it is worthwhile to note here that in his essay "Karl Popper: A Memoir," John Watkins has said the following:

A BBC producer once asked me: "What motivated him?" Well, whatever it was, it drove him with a demonic intensity. The best answer, I think, is: *problems*. Keynes said that for Moore propositions had the same objectivity as the furniture. For Popper, problems had something of the objectivity of an old bureau with inner cabinets and hidden recesses full of rich material. And he had a marvelous ability to draw others into his problems . . . Some people scoff at Karl Popper's World-3 metaphysics but it grew out of his own experience of problems that are "out there" and that turn out to be deeper and richer the more one explores them.¹¹

For Popper any solution offered for a problem cannot be demonstrated to be the absolute and eternal truth. And when it comes to scientific or empirical problems which suggested solutions or theories that could be tested by experience or observation Popper argued that no amount of positive evidence could be seen as suggesting that a scientific theory was justified, verified, or confirmed to be true. Moreover, Popper readily admitted that at times some people may indeed know some eternal truths, but

he claimed that there was no way for fallible human beings to demonstrate or know for sure that they do indeed know the truth. Thus, for Popper, even the most widely accepted solution to a problem might at some future time be improved or superseded by some unknown or yet to be created or discovered idea. This notion that scientific knowledge and all human knowledge have a chance to progress and grow over time clearly suggests that what is taught in schools at any time may not be the last word in human understanding.

A final note about the myth of the subject is that throughout Agassi's essays and books there appears to be a tacit assumption that there is something wrong with the idea of dividing human knowledge into distinct academic disciplines such as chemistry, biology, sociology, physics, etc. Following in the tradition of Popper, Agassi's scholarly endeavors are not bound by the idea that our knowledge is best characterized by the bodies of information or subject matters that are often associated with the traditional academic disciplines. And it appears that Agassi's writings in some sense endorse Popper's notion of "the myth of the subject."

VIII. AGAINST INTELLECTUAL TYRANNY IN SCHOOLS

When put in the hands of Agassi, Popper's views on the growth of fallible human knowledge make it possible to claim that many textbooks as they now exist are used in schools as a means for "intellectual tyranny." That is, for Agassi

We should not teach any textbooks in schools – not creationist, not evolutionist. The technical part of instruction should be frankly confined to handbooks, the intellectual part should comprise the history of ideas . . . And always show of each known answer to a given question that it contradicts any other answer to the same question. And if a pupil asks: "Whom should I believe?", offer him Galileo's answer: Make up your own mind!

The question is political: how can we kill the science textbook? This will be the Popperian revolution, the killing of the textbook, not the killing of logical positivism and not the pious declaration that science is our open society when science produces science textbooks. The worst of it is that the science textbook is called a paradigm, and declared *sine qua non*.

The secular revolution was the biggest revolution in the West not because it undermined religion: contrary to all forecasts it did not. Nor did it even undermine theology. It undermined tyranny – in particular it undermined tyranny in the name of religion. But we still have tyranny, and some, though by far not the worst, is exercised in the name of the best in science. We now need to undermine the tyranny in the name of science. Popper himself says so, and even emphatically. But, alas! not consistently. Nor is it easy to find out the techniques of intellectual tyranny – in religion or science – especially in education, and to design means for countering them.¹²

Are science textbooks as we now know them contributing to intellectual tyranny in our schools? Are textbooks which teach the latest, most up-to-date and widely accepted scientific paradigms inadequate? Do we need to design means for countering intellectual tyranny in our schools? These are just a few of the questions which are suggested by Agassi's brief comments about scientific textbooks that are being used in our modern world. And these questions, which Agassi has clearly answered in the affirmative, are not usually seen as being on the forefront of dialogues about educational programs. On the contrary, what makes Agassi a highly provocative and perhaps ignored educational thinker is that he often asks unpopular and what may appear on first glance to be somewhat absurd questions. Yet, Agassi has attempted to develop a program for countering intellectual tyranny in our schools; many of the details associated with Agassi's efforts to articulate a program for educational reform can be found in essays such as the following: 1) Training to Survive the Hazard Called Education; 2) The Autonomous Student; 3) The Myth of the Young Genius; and 4) Science Education Without Pressure.¹³

IX. SCIENCE EDUCATION AS THE ACCEPTANCE OF THE RULING DOGMA OF THE DAY

The above four essays by no means represent all that Agassi has to say about developing liberal democratic self-governing educational programs that are consistent with ideals suggested by Socrates in Plato's *Apology*. As can be seen in Agassi's quote about the slave-driving, Nobel Prize seeking science teacher, it is often the case that Agassi develops his educational ideas as a passing note in some essay which deals with a problem in the history or philosophy of science. And Agassi's scattered attempts to articulate significant educational problems can be seen as beginning in the early 1960s when he published his now well-known monograph *Towards an Historiography of Science*. In the second to the last footnote to this work which Larry Laudan has called a "classic study"¹⁴ we learn the following:

Historians of science defend present-day science by beautifying and romanticizing its history; this way they do it a disservice. For, they at once conceal the problems and difficulties on its way, and miss the opportunity of showing the merit of present-day science by comparison with those of yesteryear. It was Cohen's brilliant idea to open his *The Birth of a New Physics*, Garden City NJ, 1960, with a discussion of the fact that, unnoticed, commonsense is still geocentric, and with "the need for a new physics." The fault lies even deeper. It is the dogmatic manner in which we teach schoolchildren about Archimedes and Lavoisier – a way that makes it hard to avoid being wise after the event. I shall not enter this here, but merely quote a passage expressing an idea that ought to be less rarely noticed (H. Visick, "The place of science in the school curriculum", *Journal of Education*, University of Hong Kong, 1954, 12, 35):

“...in discussions on science teaching in schools we raise the question of syllabus and method but usually ignore a more fundamental question. The how and what of science teaching are dependent on the why, and the primary question for educationalists, administrators and teachers is “why should we teach science?” On the answer we give to that question will depend the extent, method, and substance of our teaching of science. This basic question is not often raised nowadays, for Science in the last half century has risen from neglect to the position of one of the most important subjects in the school curriculum...it is very important to consider afresh what can be said for the modern tradition of science teaching.”¹⁵

Is science taught in our schools in a dogmatic manner? Is it desirable to avoid dogmatism in teaching? How do we judge whether or not teachers are teaching a dogma? How do we judge whether or not students are learning to be dogmatic? Questions such as these are clearly hinted at in Agassi’s very brief comments about science teaching. Although I do not plan to enter into a detailed discussion about these questions now, I do mean to suggest that Agassi’s educational writings challenge people to think about issues related to dogmatism in schooling. And in order to have a somewhat deeper understanding about how the teaching of a dogma may indeed be a part of science education, it is worthwhile to note that Popper has criticized the work of Thomas Kuhn for not seeing difficulties with a view of science education that incorporates the teaching of a dogma. That is, for Popper,

‘Normal’ science, in Kuhn’s sense, exists. It is the activity of the non-revolutionary, or more precisely, the not-too-critical professional: of the science student who accepts the ruling dogma of the day; who does not wish to challenge it; and who accepts a new revolutionary theory only if almost everybody else is ready to accept it – if it becomes fashionable by a kind of band wagon effect. To resist a new fashion needs perhaps as much courage as we needed to bring it about . . . the ‘normal’ scientist, as Kuhn describes him, . . . in my view, has been taught badly. I believe, and so do many others, that all teaching on the University level (and if possible below) should be training and encouragement in critical thinking. The ‘normal’ scientist, as described by Kuhn, has been badly taught. He has been taught in a dogmatic spirit: he is a victim of indoctrination.¹⁶

Agassi’s educational writings to a large extent build upon ideas developed by Popper. And as noted earlier, Agassi has claimed that the Popperian revolution in science entails the killing of science textbooks which teach the paradigm endorsed by the leaders in any scientific community.¹⁷ Moreover, throughout his writings Agassi argues for some version of a Popperian educational revolution. And Agassi’s views on educational issues should be seen as important partly because for over half a century he has consistently pointed out that it is desirable for educational thinkers to reevaluate answers which are commonly accepted for perennial problems such as

“Why should we teach science in our schools?” This question is only one example of a perennial educational problem which is articulated in Agassi’s philosophical works. Also, throughout this introduction, my hope is to demonstrate that besides challenging people to reconsider perennial educational problem situations, Agassi has also suggested that there is a need to deal with unconventional and little understood questions such as, “Can there be equal vote to all members of a school, regardless of age, etc.?”¹⁸ This question, and others associated with it, will be viewed as being a part of a program for developing liberal democratic self-governing educational philosophies and programs which promote autonomy in learning.

X. REMEMBERING THE EDUCATIONAL WORK OF HOMER LANE AND A.S. NEILL

Agassi’s educational views contain a complex network of questions which when taken as a whole clearly suggest that there is much merit in having educational theorists and practitioners reconsider the value of the liberal democratic self-governing educational programs created by individuals such as Home Lane, A.S. Neill, Janusz Korczak, and Daniel Greenberg. And Agassi has made the bold claim that “the best school is a democratically run school.”¹⁹ In this introduction my plan is to lay the groundwork for examining this and other unconventional claims made by Agassi. I do not wish to argue here that Agassi is indeed correct about all that he has written in relationship to liberal democratic self-governing learning situations, but I do mean to suggest that in light of what Agassi has written about democratic schooling there is a need to further discuss what we think we know about these educational programs and experiments.

It should be noted here that Agassi has clearly stated that he makes “no claim for priority or originality”²⁰ in relationship to his educational ideas. And Agassi has not presented a new philosophy of education in his educational writings, but instead it is best to say that he has made a creative interpretation of a variety of scholars and educational reformers who have struggled to understand and articulate educational problem situations which taken as a whole have lead people to develop ideas that have contributed to liberal democratic self-governing educational programs and philosophies. In addition, it is worthwhile to note that many of the individuals who have influenced Agassi’s educational thinking are not usually taken seriously by mainstream educational philosophers and historians of education. Specifically, Agassi has suggested that Homer Lane should be credited with being one of the originators of the “idea of democratizing schools.”²¹ And Lane’s remarkable educational reform efforts are rarely remembered and greatly ignored by most significant educational scholars who have studied the development of educational problems in the twentieth century.

Homer Lane was an educational reformer who was born on September 22, 1875 in Hudson, New Hampshire. And Lane died in Paris, France on September 7, 1925. During his short life of less than fifty years Lane created two experimental

educational programs for delinquent children. The first school created by Lane was the Ford Republic, a reform school for boys that was located in a suburb of Detroit, Michigan. The second school Lane established was

the Little Commonwealth in Dorset, England, where in 1913 he had been appointed superintendent of a colony of delinquent boys and girls who governed themselves in a small democracy, each person-including Lane himself – having one vote.²²

Whether Agassi is correct in crediting Lane with helping to invent the idea of democratizing schools which have large numbers of young children is not an issue I wish to discuss here. It is enough to know that Lane was indeed a pioneer in the quest to free children from the “intellectual tyranny” that Agassi has identified as part of modern conventional schooling. Moreover, although Lane was eventually to have a lasting impact on A.S. Neill and his school Summerhill, it is nevertheless the case that Lane and his educational efforts do not usually receive even a passing reference in works such as Lawrence Cremin’s monumental three-volume “comprehensive history of American education.”²³ Now, of course, it is unfair to claim that a comprehensive educational history is not comprehensive just because it does not include a reference to every educational experiment and educator who lived or worked during the historical period being studied. Yet, what is so surprising about the fact that neither Lane nor Neill appear in Cremin’s history of American education is that in 1976 Cremin published a paper which claimed the following:

In my study of the progressive education movement, titled *The Transformation of the School* . . . the original plan . . . included a final section addressed to the question, “Where do we go from here?” But when the time came to write it, my thoughts were not clear, so I decided to end on a “phoenix in the ashes” note: if and when liberalism in politics and public affairs had a resurgence, progressive education would rise again . . . I did manage to work out . . . in 1965 . . . in a little book called *The Genius of American Education*, I argued there that the reason progressive education had collapsed was that the progressives had missed the central point of the American educational experience in the twentieth century, namely, that an educational revolution had been going on outside the schools far more fundamental than any changes that had taken place inside – the revolution implicit in the rise of cinema, radio, and television and the simultaneous transformation of the American family under the conditions of industrialism and urbanization . . .

By the time I wrote *The Genius of American Education*, a new progressive education movement was already in the making. I would date its beginning from precisely the time I was wrestling with the last section of *The Transformation of the School* which I could not write. I would date it from the publication of A.S. Neill’s *Summerhill* in 1960. (Incidentally, nothing in Neill’s book was

new; most of what he recommended had been tried in the progressive schools of 1920s and 1930s).²⁴

A somewhat new post-Deweyan progressive educational movement in the United States did indeed have its earliest beginnings in 1960 when the seventy six year old Neill published his book *Summerhill*; this book “which drew on four of Neill’s earlier works”²⁵ did endorse a liberal democratic self-governing educational philosophy which clearly argued for the idea that students should not be “compelled to attend lessons.”²⁶ Thus, when it came to answering the question, “Should elementary and secondary schools make the learning of academic skills and information optional?” Neill’s writings implied an affirmative answer to this question. On the other hand, a progressive educator such as John Dewey argued throughout his educational writings that progressive schools which allowed students to choose not to learn academic subjects were highly unsatisfactory. And as Paul Goodman has noted, Dewey disagreed with the Summerhillian idea that students should be given the “freedom to choose to go to class or stay away altogether.”²⁷

As with Dewey and many other progressive educators before him Cremin would eventually decide that schools such as Summerhill were not significant or serious educational endeavors that merited much attention. And by the time Cremin came to write his *American Education: The Metropolitan Experience – 1876 to 1980* in the late 1980s over a quarter of a century had passed since Neill’s book *Summerhill* had once been a best-seller of sorts.²⁸ As it turns out, the liberal democratic self-governing educational reform movement which Neill had helped to start was a flash in the pan. Within two decades after the publication of *Summerhill* the American version of this book was out of print. And by the 1980s much that Neill had to say about educational problems was viewed as incorrect and highly inadequate not only by Cremin, but also by people such as Jonathan Kozol who wrote a book called *Free Schools* that clearly argued against the kind of freedom that Neill considered to be desirable in a school.²⁹ Also, by the early 1970s Neill and people such as Paul Goodman who argued for Summerhill style schools were dead. And during the 1970s, 1980s, and 1990s no one of any significance was able to write books for the kind of large audiences that had bought thousands, and in Neill’s case millions, of copies of books which poorly explained why educational reformers such as Homer Lane should be taken seriously.

XI. AGASSI REMEMBERS HOMER LANE

By the time Cremin came to write the third volume of his comprehensive history of American education he considered the progressive educational movement which began with the publication of *Summerhill* to be so insignificant that it did not even merit a passing mention in a book that would be over seven hundred and fifty pages long. Moreover, Cremin’s work represents one of the most significant examples of

an American history that would ignore the efforts of Homer Lane. And one thing that is interesting about Cremin's work is that in a number of ways it follows a formula that Agassi identified in 1970 when he wrote the following:

I do feel that the young are such that under some favourable conditions they will ask for help, under some other conditions they will not . . . And so I do not see why it is not the best arrangement that the community at large should pay a few of its members to administer places where the young will feel free to ask for that help that they desire, with some measure of possibility that they will find something there that they appreciate. And so, I feel, the abolition of the curriculum and of the classroom should take precedence over the abolition of compulsory attendance at school.

The previous remark is somewhat pompous, I suppose, in view of the vast experimentation already in progress, in schools without classrooms. Even in the United States alone there is more done than easily surveyable. Indeed, my chief complaint is that plans and records of various experiments, successful and failed, are not easily available. For some philosophical reasons that still linger in the profession though they are passé amongst philosophers, most students prefer compilations to critical surveys. And, no doubt, since the experimental school is marginal, the compiler – unlike the critical surveyor – hardly ever mentions it and never does it justice. I invite the reader to go to the library of his choice and look up in histories of recent educational theory, philosophy, practice, etc., names such as Homer Lane. I found the experiment enlightening.³⁰

Cremin was indeed one of the great, if not the greatest, American educational historians of the post-World War II era. And in works such as *The Wonderful World of Ellwood Patterson Cubberley*³¹ Cremin would outline the theory of history that would guide the way he wrote books such as *American Education: The Metropolitan Experience 1876 to 1980*. This book, and the other two volumes in his series on American education, were not mere compilations, but instead they combine in some highly creative fashion what Agassi has called compilations and critical surveys. Yet, for Cremin, the kind of critical survey that is a part of his historical efforts is not centered on problems in the sense suggested by Agassi in his *Towards an Historiography of Science*. And although I greatly admire and find much value in what Cremin has written, I nevertheless find that in a number of ways he follows in the tradition of the compiler far more than is desirable. In addition, when it comes to dealing with a question such as “Are liberal democratic self-governing educational programs such as Summerhill, the Ford Republic, and the Little Commonwealth viable and desirable schools for young children?” I find that Cremin, as with Dewey before him, seems to be far too hasty in rejecting this kind of educational alternative. Now, of course, I realize that those who have taken liberal democratic self-governing educational programs seriously belong to an insignificant minority of educators who have had little or no impact on the way most educational programs are organized in

Western societies. And one reason why I consider Agassi's educational writings to be significant is that he has made an effort to keep alive a dying educational tradition that may help people learn to avoid a great deal of the unnecessary pain and suffering that educators often unknowingly and unintentionally inflict on children on a daily basis.

XII. JOHN DEWEY AND ALAN RYAN ON SUMMERHILL STYLE SCHOOLS

Unlike Cremin and the great John Dewey, Agassi has taken the work of people such as Neill and Lane seriously; this is not as easy to do as Agassi seems to suggest. And in many ways Lane and Neill do appear to endorse excessive ideas that are easy to dismiss as being absurd or ridiculous. In works such as *Experience and Education* and *How We Think* Dewey seems to make an effort to understand schools such as Summerhill, the Ford Republic, and the Little Commonwealth, but his preconceived ideas about what should count as a legitimate or a reasonable encounter between a student and a teacher prevent him from entering into the wonderful world of Home Lane; in one of his few attempts at humor Dewey provides what he considers to be devastating criticism for a Summerhill style school when he noted the following:

In reality the teacher is the intellectual leader of a social group. He is a leader, not in virtue of official position, but because of wider and deeper knowledge and matured experience. The supposition that the principle of freedom confers liberty upon the pupils, but that the teacher is outside its range and must abdicate all leadership is merely silly . . . it is held that, out of due respect for the mental freedom of those taught, all suggestions are to come from them. Especially has this idea been applied in some kindergartens and primary grades. The result is often that described in the story of a young child who on arriving at school said to the teacher: "Do we have to do today what we want to do?"³²

Dewey's above attempt to use humor to demonstrate the inadequacy of Summerhill style schools should not lead us to think that these educational alternatives are indeed inadequate. After laughing or perhaps just smiling when we read the question asked by the child in the above quote we can decide to take the child's question seriously. And for people such as Neill and Lane who advocated the development of liberal democratic self-governing educational programs a teacher should indeed provide an affirmative answer to the question, "Do we have to do today what we want to do?" And when a teacher answers this question in the affirmative he or she would be starting the process of trying to understand how we might answer questions such as, 1) Can students learn to design their own curricula? 2) Can autonomous students be directed? and 3) Do the educational views of Homer Lane, A.S. Neill, Daniel Greenberg, Bertrand Russell, and Janusz Korczak provide the basis for liberal democratic self-governing educational philosophies that can help people avoid some of the evils of our present day conventional schools? It will be remembered that questions such as these were earlier identified as being a part of a philosophical research program for developing liberal democratic self-governing

educational programs. And one reason Lane's work is historically significant is that it can help us see that perhaps, just perhaps, it is possible to progress beyond the progressive educational ideas advocated by the great John Dewey and those like Cremin and Sidney Hook who followed in and worked within Dewey's pragmatic and progressive educational tradition.

Going beyond the progress educational ideas of Dewey is indeed a massive intellectual task that could easily overwhelm a person. And what is so remarkable about the work that Neill did at Summerhill is that throughout his life he lived in the shadow of Dewey; when people would compare Dewey type schools to Summerhill type schools it was usually the case that Summerhill would be viewed as far inferior to the Laboratory School that Dewey helped to create at the University of Chicago in 1898.³³ And even in the 1990's when Alan Ryan wrote about Neill's and Dewey's schools there still remains the idea that what Neill was up to at Summerhill is "much less impressive" than what Dewey had in mind for a school. In regard to how Ryan views the educational work of Neill and Dewey it is worthwhile to note that he has written that

. . . to the extent that progressive education came to be a label for an educational theory that *overemphasized* the importance of teaching what interested the child, that *overemphasized* the child's responsibility for what went on at school, what rules governed the school activities, and what he was or was not suppose to learn, Dewey was utterly hostile to progressive education so described. He said endlessly that he believed that his emphasis on the need to take the child's abilities and interests seriously had been taken by some people as a license to abandon teaching, that "child-centered" had come to mean that it was unimportant what the teacher did, and for any such views he had complete contempt . . . The "Dewey School," otherwise the Laboratory School, was suppose to be what it's name suggested: a laboratory. It was not a teacher training institution or primarily intended to provide a dazzling different elementary education for its students. In practice it became a test bed where Dewey's ideas about how to teach children were put into practice . . .

Dewey's school lasted only seven and a half years; it was closed by being wholly merged with the training school at the institute when Dewey left for Columbia. With adequate financing there was no reason why it could not have gone on forever. Its educational results were entirely satisfactory, as everyone from the most to the least committed agreed. It was on this quite unlike more radical and freewheeling undertakings, such as the school at Beacon Hill that Dora and Bertrand Russell ran in the 1920s and A.S. Neill's Summerhill. Their results were much less impressive.³⁴

Ryan's book *John Dewey and the High Tide of American Liberalism* is a celebrated addition to the massive literature that has been devoted to the monumental work that Dewey did in his long life of over ninety years. And Ryan is correct to point out

that the mere fact that Dewey's school closed after less than one decade has little to do with whether or not his educational experiment was a worthwhile endeavor; as Ryan's comments rightly suggest, some experiments such as the Laboratory School and the Little Commonwealth close down not because they are necessarily unsatisfactory, but because they cannot muster up adequate resources. In a similar sense, we should not be too impressed by the fact that Summerhill is in operation today nearly eight decades from when it was started by Neill in 1924.³⁵ As it turns out, Summerhill was able to sustain itself on a shoestring partly because Neill used money he made from his books as a means to keep his experiment in freedom alive; to this day Summerhill is still run on a shoestring, but the shoestring is now in the hands of Neill's daughter. And for those who wish to find out more about this unconventional educational program one only has to go to the Summerhill homepage on the internet. In a similar sense, Dewey also has an easy to access homepage where one can get wonderful information about his remarkable educational experiment.

Information about Summerhill and the Dewey Laboratory School is still easy to get. But knowing only the basic facts about these two isolated educational programs does not really tell us too much. What needs to be done is to somehow find a way to decide if what we know about Summerhill and the Laboratory School can help us solve some significant educational problems. Specifically, if we recall that in his educational writings Agassi has pointed out that it is worthwhile to ask questions such as "What is the function of teachers?" and "How do we judge whether or not we have chosen the correct functions for teachers?" then we can compare the answers that Dewey and Neill have offered for these perennial educational problems. Moreover, we can extend Agassi's list of worthwhile questions to include ones such as the following: 1) What is the function of a school? and 2) How do we judge whether we have chosen the correct functions for schools?

XIII. THE SOCRATES OF THE *APOLOGY* AS AN UNCONVENTIONAL TEACHER

At this time I do not wish to explain in any detail why and how it can be said that Neill and Dewey had very different and distinct answers to a whole host of perennial educational problems such as the ones suggested at the end of the above paragraph. All I wish to note here is that in his educational writings it seems to be the case that Agassi clearly agrees with Neill and Lane about the function of a teacher and a school. And unlike Dewey who had "complete contempt" and was "utterly hostile" to schools like Summerhill, the Ford Republic, and the Little Commonwealth, Agassi in another one of those remarkable footnotes that he occasionally writes has claimed the following:

the best school is the democratically run school . . . criticism of this view is always the argument that in a democratic school pupils will make study non-compulsory and then will not study at all.

This argument is poor. It runs in the face of the fact that everybody agrees that character building or socialization is more important than building the stock of knowledge. (If you have character you will learn if you want to; if not, your knowledge from your school days will be of no avail.) . . . Daniel Greenberg of the famed Sudbury Valley School observes, in a democratic school pupils learn what they want, not what their elders and betters think is good for them . . . schools are undemocratic because in our democratic society there is a high distrust of and dislike for democracy. . .

The movement towards free education, from Homer Lane to Bertrand Russell, assumed that there is no problem of motivation to begin with. As Russell says in his “Freedom versus Authority in Education” . . . children love to invest effort in study.³⁶

In order to understand Agassi’s unconventional views on democratic schools, it is helpful to know that in answering a question such as “What is the function of a teacher?” Agassi, as with Popper before him, seems to suggest that Socrates as he is described in Plato’s *Apology* has offered the best answer to this question. On the other hand, the kind of teacher that is idealized in Plato’s *Republic* and *Laws* is viewed by both Popper and Agassi as being far inferior to the kind of teacher Socrates presents himself to be in the *Apology*. And for both Popper and Agassi the dominant educational traditions in Western societies since the time of Plato have in one form or another incorporated the image of the teacher who is idealized in the *Republic* and the *Laws*. Thus, Popper and Agassi agree that since the time of Plato our knowledge about teachers and their legitimate or rightful relationships to students has been in a sort of dark ages. For both Popper and Agassi we can get out of the dark and into the light by returning to the idea of a teacher suggested in the *Apology*.

Put in a nutshell, both Popper and Agassi seem to agree that the Western image of a good teacher took a wrong turn nearly two thousand and five hundred years ago; from Plato to Dewey and beyond the dominant educational traditions in Western societies can be viewed as regressive for Popper and Agassi. And knowledge about matters such as the function of a teacher can now progress if educators return to the ideals suggested by Socrates when he offered confusing, paradoxical, and ironic ideas such as the following:

. . . throughout my whole life both in private and in public, wherever I have had to take part in public affairs, you will find I have always been the same and have never yielded unjustly to anyone; no, not to those whom my enemies falsely assert to have been my pupils. But I was never anyone’s teacher. I have never withheld myself from anyone, young or old, who was anxious to hear me converse while I was making my investigation; neither do I converse for payment, and refuse to converse without payment. I am ready to ask questions of rich and poor alike, and if any man wishes to answer me, and then listen to what I have to say, he may. And I cannot justly be charged with causing these

men to turn out good or bad for I never either taught or professed to teach any of them any knowledge whatever.³⁷

Although Socrates states very clearly that he should not be viewed as “anyone’s teacher,” this claim has often been rejected or interpreted to mean that Socrates was a different kind of teacher than the normal teachers who existed in Athens when Socrates lived. In other words, Socrates tried to disassociate himself from the Sophists who were the kind of teachers who taught valuable knowledge or information to students. Since Socrates claimed that his wisdom was “worth little or nothing at all,”³⁸ he rightly did not view himself as a teacher in the normal sense. However, Socrates was a teacher in some kind of abnormal or unconventional sense. And Popper has claimed that Socrates was the kind of teacher who taught people to be self-critical. That is, for Popper

Readiness to learn in itself proves the possession of wisdom, in fact all the wisdom claimed by Socrates for himself; for he who is ready to learn knows how little he knows. The uneducated seems thus to be in need of an authority to wake him up, since he cannot be expected to be self-critical. But this one element of authoritarianism was wonderfully balanced in Socrates’ teaching by the emphasis that the authority must not claim more than that. The true teacher can prove himself only by exhibiting the self-criticism which the uneducated lacks . . . state interest must not be lightly invoked to defend measures which may endanger the most precious of all forms of freedom, namely, intellectual freedom. And although I do not advocate ‘laissez faire with regard to teachers and schoolmaster’, I believe that this policy is infinitely superior to an authoritative policy that gives officers of the state full power to mold minds . . . The Platonic ‘Socrates’ of the *Republic* is the embodiment of an unmitigated authoritarianism . . . His educational aim is not the awakening of self-criticism and of critical thought in general. It is, rather, indoctrination – the molding of minds and of souls which (to repeat a quotation from *Laws*) are to become by long habit, utterly incapable of doing anything at all independently.³⁹

From the time he published *The Open Society and its Enemies* in 1945 until his death at the age of ninety-two in the early fall of 1994 Popper argued that the works of Plato clearly articulate two very distinct and contradictory philosophical perspectives. Specifically, it was Popper’s claim that in works such as the *Apology* and the *Meno* Plato articulates how it is possible to have a liberal educational philosophy that is consistent with the views developed by the real Socrates who lived in Athens from 470 B.C. to 399 B.C. On the other hand, Popper’s historical interpretation of Plato’s works suggests that books such as the *Republic* and the *Laws* argue for an illiberal totalitarian educational philosophy that is inconsistent with the ideas that the real Socrates was willing to die for. Now, of course, people familiar with the *Republic* know that the major character who eventually argues for what Popper views as an illiberal totalitarian philosophy is called Socrates. However, Popper’s claim is that

the Socrates of the *Republic* is a creation of Plato's imagination. And for Popper the person called Socrates in the *Republic* is a fictitious or false Socrates who Plato uses to defend ideas developed by Plato himself, rather than ideas which would have been endorsed by Plato's teacher Socrates.

Popper's historical interpretation of the works of Plato has not been accepted as the standard or best way to view Plato's work. And both before and after the publication of *The Open Society and its Enemies* many Western scholars have tried to understand why it is that Socrates seems to argue for very different ideas in works such as the *Apology* and the *Republic*; in this short paper there is no way I can even begin to summarize the numerous interpretations that have been offered for Plato's work. In a similar sense, I cannot go into detail about the criticism that has been offered for Popper's historical interpretation of the problems related to discovering the actual ideas which were developed by the real Socrates. In this paper all I wish to note is that Popper's claim that Socrates' teaching needs to incorporate "one element of authoritarianism"⁴⁰ has been challenged by Agassi who has suggested the following:

Popper's opinion always was that children are authoritarian by nature and they have to be charmed by their teachers and educated in an authoritarian manner – in order to have them grow out of their authoritarianism, need one say. I do not agree: A major argument in his *The Open Society and its Enemies* is, after all, that we do not know what human nature is (though we may refute some views about it if they are not defended apologetically). Moreover, his view is refuted by democratic schools where authority is democratically controlled and pupils learn no worse than in authoritarian schools . . . Popper's idea of the romantic element in education amounts to condoning manipulation of pupils for their own good.⁴¹

Whether Agassi is correct about democratic schools not needing any form of authoritarianism is indeed a topic that needs to be discussed in detail. And at this time I do not plan on beginning a discussion about this very important issue, but I do wish to note here that the debate between Popper and Agassi about Socrates and authoritarianism should be seen as significant for further discussions about the development of liberal democratic self-governing educational philosophies and programs.

XIV. CONCLUDING REMARKS ABOUT EDUCATIONAL PROBLEMS

The Socratic educational reform movement hinted at in the works of Popper and Agassi seem to suggest that education, learning, the quest for knowledge, and human inquiry are at their best when they are viewed as attempts to solve a problem or answer a question; for both Popper and Agassi the concept of having a problem to solve is interchangeable with the idea of attempting to answer a question. In other words, any problem can be formulated as a question to be answered and any question can

be called a problem to be solved. Moreover, a problems approach to education can at times be significantly aided if a person can make a conjecture about the question that best articulates the problem a person wishes to discuss and perhaps solve. And in relationship to Agassi's educational essays my conjecture is that an over-riding problem which he attempts to solve is the educational problem of avoiding avoidable suffering (i.e., How can people learn to avoid some of the avoidable suffering that is now being created in educational programs that have their roots in monumental works such as Plato's *Republic* and *The Laws*?)

In addition to the above problem, this introduction has suggested that in one way or another Agassi's educational essays attempt to answer the myriad of questions that follow:

- Who are the people who have wisdom?
- Why should we teach science in our schools?
- Is science taught in our schools in a dogmatic manner?
- Is it desirable to avoid dogmatism in teaching?
- How do we judge whether or not teachers are teaching a dogma?
- How do we judge whether or not students are learning to be dogmatic?
- What should be included in the prescribed curriculum of a school?
- Can we develop ways to alleviate the suffering that the present educational system inflicts on students and others?
- Can we avoid having educational programs which train large numbers of students to hate mathematics and/or history and literature?
- Do the educational views of Homer Lane, A.S. Neill, Daniel Greenberg, Bertrand Russell, and Janusz Korczak provide the basis for liberal democratic self-governing educational philosophies that can help people avoid some of the evils of our present day conventional schools?
- Can students learn to design their own curricula?
- Can the autonomous student be directed?
- How can we avoid doing damage to students?
- What is the function of teachers?
- How do we judge whether or not we have chosen the correct functions for teachers?
- What is the function of a school?
- How do we judge whether or not we have chosen the correct functions for schools?
- How do we judge whether or not teachers are successful at doing the functions we have chosen?
- Can the tasks we have chosen for teachers be computerized?
- If tasks chosen for teachers can be computerized under what conditions is this advisable?
- Should the worth of students and others be granted independent of achievement?
- Should we extend civil rights as guaranteed by the United States Constitution only to women and minorities, or also to minors?

INTRODUCTION TO THE HAZARD CALLED EDUCATION

- Can there be equal vote for all members of a school, regardless of age, etc?
- Does the traditional code of education at times contribute to the suicide of some students?
- If we accept that the traditional code does at times contribute to suicide do many educators hypocritically and cowardly blame some stringent application of the traditional code?
- Do educators often blame tragic student suicides on accidents or scapegoats in order to block any attempt at improving traditional education?
- Is it often the case that those who compete for Nobel Prizes are slave-driving teachers who are role models for other teachers?
- Do such teachers give their students careers in place of moral and economic autonomy?
- Should moral and economic autonomy be goals of education?
- Is the Swedish Academy an unwilling Moloch which absent-mindedly devours innocent youths in many universities throughout the world?
- Does the quest for Nobel Prizes perhaps corrupt the teaching of science?
- Are science textbooks as we now know them contributing to intellectual tyranny in our schools?
- Are textbooks which teach the latest, most up-to-date and widely accepted scientific paradigms inadequate?
- Do we need to design means for countering intellectual tyranny in our schools?

Briefly stated, Agassi's educational essays provide one way for people to begin the process of engaging in dialogues about significant educational problems. Agassi has by no means provided the final word on any of the problems he has raised, but he does provide ways to encourage people to think about the desirability of returning to Socratic ways of education. Moreover, Agassi's educational essays can and should be viewed as significant partly because he has recognized the importance of a problem such as the educational problem of avoiding avoidable suffering. This problem is rarely recognized by contemporary educational theorists and practitioners. And our dialogues about educational theory and practice could be greatly enhanced if educators would not avoid the educational problem of avoiding avoidable suffering.

ENDNOTES FOR TOWARDS A SOCRATIC EDUCATIONAL PHILOSOPHY

1. Popper, K.R. (1962). *The open society and its enemies* (3rd. ed.). London: Routledge and K.Paul, pp. 132–136.
2. Lakatos, I. (1980). *Mathematics, science and epistemology*. London: Cambridge University Press, pp. 9–10
3. Popper, *The open society and its enemies*, p.ix.
4. Agassi, J. (2008). *A philosopher's apprentice in Karl popper's workshop*, (revised, extended and annotated edition). New York, New York: Rodopi, p. 173.

INTRODUCTION TO THE HAZARD CALLED EDUCATION

5. Agassi, J. (1984). Training to survive the hazard called education. *Interchange*, Vol.15, No. 4, p. 9.
6. Agassi, J. (1981). *Science and society: studies in the sociology of science*. Dordrecht, Holland: D. Reidel Publishing Company, p. 482.
7. Plato (1956). Translator Church, F. J. *Apology*, Indianapolis, Indiana: The Bobbs-Merrill Co. Inc., p. 28.
8. Plato (1999). Translator Jowett, Benjamin. *Apology*. New York: The Book-of-the-Month-Club, Inc., pp. 517–521.
9. Jarvie, I.C. and Agassi, J. (1987). “The rationality of dogmatism,” in *rationality: the critical view*. Dordrecht, The Netherlands: Martinus Nijhoff Publishers, pp. 440–441.
10. Popper, K.R. (1983). *Realism and the aim of science*. Totowa, New Jersey: Rowman and Littlefield, p. 5.
11. Watkins, John (1997). Karl popper: a memoir. *The American scholar* (Spring), p. 218.
12. Agassi, J. (1988). *The gentle art of philosophical polemics*. Lasalle, Illinois: Open Court Publishing Company, pp. 493–494.
13. References for these articles can be found in the text.
14. Laudan, Larry (1977). *Progress and its problems*. Berkeley, California: University of California Press, p. 164.
15. Agassi, J. (2008). “Towards an historiography of science,” in *Science and its history*. Springer, p. 242.
16. Popper, K.R. (1970). “Normal science and its dangers,” in *Criticism and the growth of knowledge*, eds. Lakatos, I. and Musgrave, A. New York, New York: Cambridge University Press, pp. 52–53.
17. See footnote twelve.
18. Agassi, J. (1970). “The preaching of John Holt,” in *Interchange*, Vol. I, No. 4, p. 118.
19. See footnote thirty-six.
20. Agassi, J. (1987). “The autonomous student,” in *Interchange*, Vol.18, p.14.
21. Agassi, J. (1977). *Towards a rational philosophical anthropology*. The Hague, The Netherlands: Martinus Nijhoff, p. 359.
22. Neill, A.S. (1969). “Homer lane: a personal assessment,” in Lane, Homer, *Talks to parents and teachers*. New York, New York: Schocken Books, p. 5.
23. Ravitch, D. (1992). “Lawrence a. cremin,” *The American scholar* (Winter), p. 85.
24. Cremin, L. A. (1976). “The free school movement,” in ed., Fantini, Mario D., *Alternative education: a source book for parents, teachers, students and administrators*. Garden City, New York: Doubleday and Company, Inc., pp. 59–61
25. Croall, J. (1983). *Neill of summerhill: the permanent rebel*. New York, New York: Pantheon Books, p. 350.
26. Neill, A.S. (1960). *A radical approach to child rearing*. New York, New York: Hart Publishing Company, p. 13.
27. Goodman, P. (1962). *Compulsory mis-education and the community of scholars*. New York, New York: Random House, p. 45.
28. Cremin, L.A. (1988). *American education: the metropolitan experience-1876 to 1980*. New York, New York: Harper and Row Publishers. Also see Croall, *Neill of summerhill: the permanent rebel*, pp. 353–354.
29. Kozol, J. (1972). *Free schools*. Boston, MA.: Houghton Mifflin Company, p. 75.
30. Agassi, J. “The preaching of John Holt,” p. 116.
31. Cremin, L.A. (1965). *The wonderful world of ellwood patterson cubberly*. New York, New York: Teachers College, Columbia University.

INTRODUCTION TO THE HAZARD CALLED EDUCATION

32. Dewey, J. (1933). *How we think: a restatement of the relationship of reflective thinking to the education process*. Chicago, Illinois: Henry Regnery Company, pp. 273–274.
33. Much has been written about the Laboratory School. For three accounts see the following: Dykhuizen, G. (1973). *The life and mind of John Dewey*. Carbondale, Illinois: Southern Illinois University Press; Dewey, J. (1990). *The school and society and the child and the curriculum*. Chicago, Illinois: University of Chicago Press; Westbrook, R.B. (1991). *John Dewey and American democracy*. Ithaca, New York: Cornell University Press. Also, see the reference in the following footnote and the first reference in footnote twenty-eight.
34. Ryan, A. (1995). *John Dewey and the high tide of American liberalism*. New York, New York: W.W. Norton and Company, pp. 134–136.
35. For updated information about Summerhill see its homepage on the Internet.
36. Agassi, J. *Towards a rational philosophical anthropology*, pp. 314–315.
37. Plato, “*Apology*.” Translator Church, pp. 39–40.
38. *Ibid*, p. 28.
39. Popper, K.R. *The open society and its enemies*. Vol. I, pp. 129–132.
40. *Ibid*.
41. Agassi, J. *A philosopher’s apprentice: in Karl popper’s workshop*, p. 59.

PART I
THEORY

TRAINING TO SURVIVE THE HAZARD CALLED EDUCATION

For many years, this paper has been rejected by a variety of educational journals. It was originally read at the behest of Interchange and the Department of History and Philosophy of Education, at OISE, 6 February, 1970. Professor Agassi, one of the most well known of Karl Popper's students From the London School of Economics, and a professor of philosophy born in Israel and Canada, decided to have one last attempt at finding a journal willing to publish his reflections on the evils of compulsory instruction, the errors made in the name of educational reform, and the strategies necessary to end the "illegitimate coercion" of knowledge. Interchange is delighted to have the chance to publish Dr. Agassi's reflections. We hope that it will inspire those, both opposed and in sympathy, to write in "interchange" with him. Ian Winchester, Editor

The present paper centers on one phenomenon – namely – the illegitimate coercion practiced in schools to obtain knowledge. It seems to me an unquestionable that the hatred of geometry or of history or of Shakespeare is not inborn but the outcome of this harmful and utterly redundant coercion. I wish to present a threefold thesis and a program for immediate action which will hopefully have a snowball effect. First, whenever students are coerced, educational reformers look for means to replace coercion with cooperation: they I seek the motivation that would enable teachers to push coercion to the background as a last resort. (The exception is corporal punishment, which many educational reformers oppose unconditionally.) Second the proper task is not to replace coercion with motivation but to train students to neutralize its effects. Third, this may lead to the validation of legitimate coercion together with the collapse of illegitimate coercion. This collapse will effectively be the end of imposed studies and, thus, of most of the compulsory curriculum. The establishment of equality between faculty and parents, and between faculty and students, the establishment of co-operation between all those who are actively concerned with education on an equal footing will be the natural next step – though this is beyond the scope of the present paper. My proposals here concern techniques for neutralizing illegitimate coercion and for disseminating information concerning these techniques. They are meant to be put into operation at once, but not necessarily as they stand. On the contrary, an essential element in what I propose is that we build an informal non-conformist movement for independent studies, comprising students, teachers, parents, administrators, educators and others, whose chief function is to disseminate proposals, assemble experiences arising from attempts to

implement them, provoke public discussions, and lead to improved versions of the original proposals. In brief, I propose the improvement of education, particularly as this relates to alleviating the suffering that the system now inflicts on students and on others. I also suggest techniques for introducing into the process of education what may be called the scientific, or critical, or experimental method (these three labels are used here as synonyms).

Let me begin with an observation about the rewards of education in the crudest terms, that is, in terms of dollars and cents. Economists have puzzled about the fact that rewards from investments in education may be so much higher than the average payoff. To illustrate this, take two extremes. Consider the fact that without the benefit of literacy one can hardly become a skilled worker today, whereas a literate person will almost necessarily pick up a skill – that is to say, he will acquire some skills, and even with ease, unless he is artificially prevented from doing so. Consider also that if a business concern supports a group of high school graduates through college and medical school on the understanding that on establishing their private practices they will pay the business concern half their added income for the same number of years they were supported in school, and if only half of them open private practices, and pay as agreed, then already the profit margin is higher than could be expected in the investment market.

These are the extremes. In the middle there is much frustration. Often a student works hard for years, only to end up with a wishy-washy bachelor's degree of almost no use for anything, except for occupations for which he is mentally quite unprepared. He will be, as the expression goes, overqualified for some jobs, under qualified for others, and thus probably unemployed. The reason for this failure is quite obvious and easily testable by anyone interested: when the student complains about the poverty of his education, he is told that it is useful; but when he asks about the uses, he is told about higher intellectual values: and so on, back and forth. This is to say that the student pays for the exercises in self-deception which his teachers regularly perform. No doubt, the economic profitability of education, though it already relatively very high, could be made much higher by the elimination of this form of self-deception. And this elimination could be achieved fairly easily through the exercise of the rather common and fairly usual means of public, rational debate. If it turns out, for instance, that some dull work – such as mastering a vocabulary of technical terms – is essential for the attainment of certain careers, then let those, and only those who are bent on such careers undertake the minimum necessary amount of that dull work. There is no reason to have, as a by product of education, half the adult population hate mathematics and science, for example, just because some of their classmates wanted to end up as scientists; nor do scientists have to be trained to hate history and literature, as another example.

To conclude this introductory note, let me point out that when an economist assesses the worth of a farmer's labors, he does not simply assess the value of his crops. He also subtracts from this first, the damage he has caused the land (such as erosion and chlorination which he brings about through irrigation). Second, the

economist subtracts at least the yield from the farmer's land when fallow. A more modern economic approach also requires that he subtract what income he could earn if he were otherwise employed – which is a way to compare his efficiency as a farmer with that of the other methods of employment available to him. But I do not wish to pursue the economic model much further. Let me, rather, consider two educational theories. One is the classical western theory; it is false. It has its origins in the philosophy of the early 17th-century thinker, Sir Francis Bacon, and its full expression in the 18th-century classic, *Emile*, by Jean-Jacques Rousseau. According to the classical theory, the best result in education is achieved when the field is left utterly fallow – when there is no instruction at all of any kind whatsoever (or almost none). A more modern theory, and one which I think is the best we have, is a compromise between old and new ideas. It is credited to Homer Lane, Bertrand Russell, and Janusz Korczak and it states that students need the guidance of both peers and adults (as tradition has it) but that they achieve this best if they remain the judges and masters of the situation (contrary to tradition). In other words, students learn best if they are left to select problems for study, or even goals for their own education, not to mention the right to ask (or not ask) for help, as well as the right to reject all help with impunity.

Rousseau's educational theory (which is really the classical theory widely accepted throughout the Age of Reason) is based on the philosophy of science of the Enlightenment, which, in turn, is part of the psychological theory of the age, namely, associationism. This classical theory is utterly passivist; and being passivist, it prefers the unadulterated impression fresh from the hand of Nature to the distorted instruction of teachers. The modern theory is more activist; according to it, learning, scientific or otherwise, is and ought to be a matter involving controversy and critical debate, trial and error, correction and modification. The modern method of learning is Socratic, something akin to the friendly/hostile co-operation which Popper describes as science and to the successive stages of cognition which Piaget describes as the rather spontaneous growth in the normal child's process of learning. The difference between the older passivist view and the modern activist one is tremendous. The classical theory views open-mindedness as the absence of obstacles. Teachers may all too easily provide the worst obstacles, according to the older view, because teachers are prone to be active. The modern theory views open-mindedness as the readiness to reconsider whatever has been previously considered as true, and even what has been generally taken to be amply verified (e.g., Newtonian mechanics). What the two theories – the classical and the modern – share is the idea of progress, scientific and personal. The really old-fashioned theories (of education, science, and psychology) take teaching to be the transmission of a body of knowledge – be this Chinese, Catholic, Muslim, Talmudic or Communist. The two more newly fashioned theories (of education, science, and psychology) take it for granted that the ability to learn is much more valuable than knowledge because, however much knowledge one possesses, one's knowledge (and education) is never complete. Hence, the classical and the modern views share more similarities than differences,

even though the contrast between them will be the focus of attention here. All this, I think, is enough philosophy to approach the topic at hand. I wish to start now with a few sketchy historical observations. The classical (and mistaken) idea that the best education is self-education, unaided by a teacher, has been popular since the 18th century. Yet it has not led to the abolition of the school system. This is not because Rousseau's idea that a child can teach himself reading and writing is in any manner incredible. After all, Edgar Rice Burroughs hardly qualifies as an intellectual and his Tarzan has an excellent physique but not a particularly high IQ. Yet Tarzan, you may remember, taught himself reading and writing, almost exactly like Emile. Why has Rousseau's idea been popular, yet schools have remained operative with curricula, age-group separation, and instruction? The reason for this is a fascinating topic for students of the history of human folly and dogmatism. Usually they blame the decadence of civilization for corrupting students to the point where they need rectification or at least protection. I shall not go into further detail. I shall only say that since Rousseau's theory was believed but not implemented, the possibility of school reform was seriously impaired. Where the new ideology does not apply, the old one lingers on.

But one need not be so systematic as to hold a consistent ideology on the one hand and a consistent practice on the other and forever to ignore the inconsistency between the two. Johann Heinrich Pestalozzi, child of the Enlightenment and believer in passive self-education, invented a delightful compromise. The poor children he taught were so remote from nature and had been made so degenerate by the worst in civilization that they had to be taught; but they had to be taught not so much the curriculum as the proper ways and means to combat the ill effects of civilization. According to Pestalozzi, these ill effects had to be removed from them before they could rediscover their natural capacities. But once rediscovered, they would teach themselves unaided. These children, like criminals, were thought of as being out of tune but still human and so deserving respect. Since they were defective, the teacher had to retune them with nature and then, in degree, leave them alone to learn from Nature herself. All this is but a somewhat better version of the Rousseauian view (with the gloss that Kant added to Rousseau's philosophy). What is novel about this theory is the idea that the teacher has to seek the co-operation of the student in the matter of retaining him with his own nature. This desire to enlist the students' co-operation was the first real break-through. Not surprisingly, it was deeply linked with the well-known fact that Pestalozzi advocated vocational education for poor students, delinquent or not. The result was magnificent. In one century, starvation was eliminated from Switzerland, and even poverty became a rare thing there. All around the world, vocational schools opened where slum kids learned to find their sense of dignity (though other vocational schools were and remain like reform schools). Pestalozzi influenced Homer Lane, the great American educational reformer, who, to secure more co-operation with students and convicts, developed the idea of school self-government. This influenced, among others, Mgr. Edward J. Flanagan and A. S. Neill. Pestalozzi also greatly impressed others, such as

Anton Makarenko and Janusz Korczak, and thus all free schools to date. But before this trend was developed another trend of reform was tried out, a kind of a hybrid between the classical Rousseauian and the traditional approach. The idea that a student may co-operate with his teacher was so forceful that it also (and indeed, first of all) influenced teachers who believed in the traditional view of education as the transmission of a body of traditional knowledge. It struck a number of educators who wished to retain the traditional views as a new ray of hope. And so they jumped at the opportunity to make schooling, as they conceived it, less unpalatable. But their objective was to raise education's level of efficiency, not to arouse in students any natural capacity to learn new things. One of these reformers was Maria Montessori. What she inherited from the Age of Reason was its psychology of perception and co-ordination – associationism – which, two centuries after it had become common property, could be used to reform the school system. The strength and weakness of the associationist psychology is that it applies to man and beast alike. It cannot help us understand why only man but not beast tags names to sensations and to their constant conjunction. But it therefore considers the newly born as an individual engaged in learning. And so Maria Montessori could introduce preschool training in coordination. Had this led her to develop vocational training, it would have been quite natural; but her interest lay elsewhere. She supported the regular curriculum but felt it could be administered less painfully. When children were bored and not allowed to play, she observed, they played under the table-and masturbated, too, but we need not be so crude as to say so out loud. She recommended that games be officially introduced into school and integrated into the educational system, whether for the development of co-ordination or literacy. Montessori, and many other reformers at the turn of the 19th century, discovered that education was a bitter pill that could be sugarcoated, thus coaxing students to swallow it, perhaps even with pleasure. The ideology behind the reform, the ideal of self-education, was entirely lost on the way. All the great innovators of didactics and of humanized schooling, and Montessori among them, never doubted that education was a one-way street where teachers handed knowledge down to their ignorant students. The innovation was purely didactic, a technical matter of sugar-coating. And even though sugar-coating was not new (children's books and educational toys are as old as the Enlightenment), its introduction into schools was a genuine revolution. Montessori had, indeed, to build her own chain of schools in order to implement a century-old innovation when she entered the field. This was how backward education was in her day. Nowadays, at least, her ideas are accepted, to some degree, in almost every school in the West.

RECENT REFORMS

Perhaps it is a measure of the overall progress in our society that we are not content today with such innovation. Even John Holt, in *How Children Fail*, describes how the standard mode of education stupefies children. Until they go to school, he observes, children teach themselves. Then school forces them to put a halt to

self-education, and deterioration sets in. He notices that children develop some techniques of self-defense – methods of surviving the hazard called education. These include playing industrious, playing stupid, and courting the teacher while hoping to trip her up. Holt notices how inefficient all this is. He has nothing else to offer. More recently, he expressed hope that with love and dedication some teachers in the slums will do better than the average teacher and then serve as a model for others. John Holt is the house rebel, like the poet Yevtushenko in the Soviet Union. He sees the shortcomings of the system, applauds a brave quixotic attempt to defy it, but in sheer self-defense and in the name of survival, finally joins the system and advises others to do likewise.

Yet even house rebels can serve a positive function. Their pronouncements signify the fact that certain evils of the system are now publicly known and acknowledged as such, even if on the excuse that they are necessary. Their pronouncements are milestones in the history of the growth of public awareness of the evils in the midst of which we dwell. From now on, there is no need to debate the question. Those who still doubt that ordinary schools make ordinary clever kids into ordinary dumb adults can be told to read John Holt's best-selling book. There is nothing new in *How Children Fail*. The very existence of free schools, experimental schools, and all sorts of alternative schooling testifies to the existence of dissatisfaction with education. No doubt, quite a few of these alternatives were developed on the basis of Freudian, Socialist, and other sectarian or esoteric principles. Yet most esoteric schools are conventional so that those rare esoteric schools which are also experimental conduct educational programs which are distinct from their sectarian ideologies. Also, not all experimental schools have been successful—otherwise they would not have been genuinely experimental. And others have been casualties either of hostility and bigotry or of some other extra-educational failing. It is hard to point to many successful free or experimental schools – perhaps Summerhill is the only well-known one in the English-speaking world, and it is sectarian since it is run on Freudian principles. Yet almost all the successful educational reforms that have become public property have been endorsed by the general educational system only under the threat of schools operating outside the general educational system. Without the sense of a genuine threat from these more liberal schools, much of the liberalization mat has taken place in the last century would not have been allowed or would have been destroyed soon after implementation.

But the pressure from the experimental schools, which are generally more liberal than those within the general educational system, is nowadays countered by pressure from the still more authoritarian innovations, responsible for the new mathematics and the new science. In various university-stream high schools, where these approaches were first implemented, immense pressure is frankly put on students with the aid of their parents. Students are stuffed like geese. Success is measured by the number of graduates who land in the Ivy League universities, or by the number of Ivy League graduates who attain national awards. In all such schools, there is no moment wasted on the lot of the misfits, of the ones less successful than the pride of the crop; not a moment is spent

on the ones who do not aspire to reach the top or the ones whose hopes and chances to reach the top are slim; no discussion is allowed about the community's criteria of excellence, or of the correctness or empirical reliability of the indicators of excellence. All energies are invested in efforts to grab as many of these indicators of success as possible. Never mind how many of our high school students end up graduating from Ivy League universities. What matters is how many get there, or how many of them achieve, ten or 20 years later, some national or international fame. The university which is in the Ivy League gets the cream of high school graduates by its own lights, yet its only concern is with the freshmen who have good chances to become either brilliant scholars or rich alumni. As for the rest of them, its only concern is that they leave as quietly and as soon as possible; certainly, there is no follow-up on the damage their alma mater may have caused them. As the competition to go to Ivy League universities increases, high school children are taught to chat knowledgeably about DNA and RNA, and to say carbon 12 – with no knowledge of atomic weight or molecular structure. They may reach the best school thus, but they'll hardly stay there (as yet). Some in the Ivy League are now worried about the increased rate of dropouts there (it's becoming bad for their reputation). Others are more complacent (not much can possibly damage Harvard's good name, for example, not even Harvard's own president).

This is the place to say a few words on the place of love in education. There is one popular philosophy of education not mentioned here thus far, and it is the romantic theory, which says that the chief role of education is character building. Without discussing this theory one may notice the two chief instruments by which its adherents implement it: one is curriculum, the other is love. As to love, if it makes the world go round, it can do whatever you want it to do.

Pestalozzi already saw it as a means to his end, and so did Homer Lane. Rudolf Steiner believed unusual doses of it are needed for the education of the mental defective, and many believe the same today regarding underprivileged children. There are, let me report, experimental schools which are highly achievement oriented yet operate on love alone. To my mind, these are some of the most bigoted and harmful institutions around: they do not coerce students but ration love to them in the measure of their achievement, thus making them obsessive competitors. When one rations bread in accord with achievement, the student need not be deceived; but when he is hungry for love and does not know it, his destruction by the loving and patient and dedicated teacher is a truly unbearable sight. But I am picking on these institutions. After all, facts are on their side: they send ever so many of their victims to the Ivy League cemeteries.

What we can learn from all this is that many students, in schools and colleges, are suffering and in need of immediate help. We also can see that the educational system is rather easily swayed one way by liberal schools – be they experimental or doctrinal – and in the opposite direction by arch-achievement-oriented schools – be these authoritarian, tough-and-no-nonsense schools or schools emotionally conducive to learning. If so, then, quite possibly, helping the students in need of help may sway the system more forcefully and perhaps even transform it.

This is not a survey of all the reform movements in education in the West. Rather, it is a presentation of the interplay between the two poles (or myths) of education, the traditional, fully authoritarian school ideology and the Enlightenment ideology of utterly free and natural self-education. The reason the ideology of self-education affected school reform was that some of its believers reconciled it with the existence of curricula, age-group separation, and instruction. Indeed, some went so far as to abolish both the curriculum and age-group separation, yet they stuck to the hard core, to instruction. (After all, instruction is ancient, curriculum is medieval, and separation, Napoleonic.) Those who rejected instruction could only influence the general educational system indirectly by constituting a threat to it from the outside. But this threat is now partly countered by a threat from the opposite direction, by the competition from the highly successful achievement-oriented schools. Many schools are torn between the appeals from both extremes, and are thus paralyzed and confused. And so the question is, can we do better than merely institute more liberal schools? How can we aid those who cannot escape the existing general educational system? Is there, quite in the abstract to begin with, any alternative to born (old fashioned) instruction and (Age of Reason) self-education? It looks as if logically no third possibility exists. This is because the question is poorly put. It is not instruction which is evil, but the authority of the instructor. Here the new theory of learning as trial and error can be of help. Albert Einstein was convinced that the general educational system is a major evil, yet, he said it is extremely easy to overcome: all one need do is abolish the authority of the instructor. First, in the abstract, the student may choose his instructor, err in his choice, and then try to improve his exercise of his own choice. Second, in the way of rendering the abstract idea more concrete, we can consider the existing general educational system on its evils and ask how we can reduce slightly, but immediately, the teachers' authority and, in its stead, slightly, perhaps, but immediately, increase student/teacher co-operation.

To this end it is useful to have answers to some obvious questions. What is the current ideology in educational circles of influence? What is the common ideology among the greater part of current day teachers? Is it of any influence? Can it be of any influence, good or bad? These are important questions which can be studied empirically and are studied empirically. But as I am not qualified to address them, I shall make a brief comment and conclude this section with a personal impression. My comment is on the view of education as officially expressed recently [i.e., around 1970] by the provincial government of Ontario in a glossy document [Living and Learning, 1968] which, I am told, is a standard target of criticism here [i.e., in the Ontario Institute for Studies in Education]. Let me make the following observation on it, assuming its characteristics to be quite general. To begin with, the document endorses all the reformist educational philosophies around; with no feel for consistency, it repeats every high-sounding suggestion, seemingly more anxious to sound progressive than anything else. Its inconsistencies, even, are banal; more freedom and more instruction are needed (put more into the curriculum and have more study hall). When it comes to practical proposals, the teacher is told to

allow the creative pupil to create even at the cost of allowing him to deviate slightly from routine. The operative word is “slightly.” Now, in all schools that I have ever seen, some students are given special allowances if they can produce something outstanding which can be displayed at PTA meetings and at visitations or inspections of educational authorities or of civic bodies. The progressive report has nothing more to recommend and, implicitly, it endorses the horrid repressive measures that children not branded creative have to suffer. There is a vacuum here we may try to fill with an ideology that can be applied now and in a direct manner.

Let me add to that end, before closing this section, another personal impression. My interest in education has led me for decades to ask high school teachers, university professors, and other educators some very general and rather superficial questions regarding both the curriculum and instruction. Ever since I discovered, to my amazement, how beautiful are some items in the curriculum which look so horrid in school (remember Alfred North Whitehead’s observation that high school had spoiled King Lear for him personally, and for good) I have pestered these people with such questions as why teach traditional high school versions of Euclidean geometry to non-mathematicians. I feel I must report it, incredible as it is, that ever so often mathematics teachers honestly believe that traditional Euclidean geometry sharpens the mind, and that it is useful, and that its study enriches the student’s life. I will not condescend to the level of refuting these flimsy contentions. Those who honestly think there is truth in them are advised to glance at the empirical literature, meager as it is, for the abundant refutations. Further, I wish to report mat most high school teachers, university professors, and other educators – reformers or not – including all of my teachers, from kindergarten to graduate school, are such avowed educational paternalists that they view educational liberalism more as a tease than an honest theory. I cannot complain since I consider their view as something even less than a tease; but I feel it is worth reporting such facts of one person’s experience.

PROPOSALS FOR IMMEDIATE REFORM

The question is, what to do right now, and how? The target should be the immediate suffering of students and others ensuing from the illiberality of the system. Students from elementary school to graduate school all over the world suffer from two very painful complaints. One is boredom. The other is bewilderment, or a sense of being lost, or a sense of inadequacy, or even an incomprehensible but profound sense of failure, often tainted with a sense of guilt, and, in severe cases, of despair. It is difficult to say which complaint is more painful, that of boredom or that of bewilderment. Fortunately, if we attack the student’s sense of boredom intelligently (by which I mean while enlisting his co-operation), his sense of bewilderment will disappear or diminish at once. By enlisting his co-operation, we let him know that the inadequacy and failure are those of the general educational system, that he need not feel lost or guilty or desperate. And as bewilderment and boredom go together, winning the battle against one can be won simply by winning the battle against the other. Let me make a

point clear. It was the idea of the Age of Reason that man is essentially good, that his corruption is due to the prejudice and the bigotry and the sectarianism of his specific culture. It became liberal practice to repeat the dubious old Roman saying, "Every Senator is a good man; the Senate, however, is a beast." Freudianism gave this doctrine its final touch: the fault is not of the student but of the (educational) system. It is now the key to indulgence and self-indulgence the likes of which were never even dreamt of by Freud, let alone by his predecessors. When speaking of the evils of the general educational system, however, we should take care to avoid assertions conducive to indulgence or self-indulgence. In fact, we need neither attack nor defend the system as such. For, to say a student need not be bored by school, stay in class, or follow the curriculum, is not to ask whose fault is his failing to do so; nor is it to blame the general (educational) system. Rather, it is the educational reformer who does believe that a student should follow the curriculum who will usually blame the general (educational) system for the student's alleged failing. Indeed, my whole point is this: once the student learns that some people think his alleged failure is no failure at all, then he can begin to learn to fight boredom, and by this, his position will vastly improve. Those who do not believe this can try it out as a simple and obvious experiment. I have. The way to teach students to fight boredom is, briefly, by talking to them as equals. The key attitude is not love but respect (Korczak), with minimum effort, the student can learn some educational philosophy (and some of its major applications) and very soon he'll outsmart the teacher. This will reduce boredom quite considerably, and lead to replacing the painful and harmful bitterness with the healthy conflict of ideas.

There are technicalities involved, skills which are extremely useful and not difficult to acquire, such as the use of tables of contents, prefaces, and indexes, the use of school libraries, or those of the local college or the local community, the search for better materials than those used by the teacher, including texts on non-Euclidean geometry or history from points of view opposed to that of the teacher. Students can be trained to do some window-shopping and use the little liberty the school offers more efficiently than now-perhaps with the aid of student consultation committees in the college or the dorm. Students will be delighted to read some of the common teachers' manuals, and instead of sitting bored in class as students and receptors, sit there as observers and mock-supervisors, critically comparing observations of different teachers with each other, and quoting the manual to deviant teachers perhaps. It is amazing how successful the college teacher evaluation books are, yet how poor they are in their assessments, or rather in the criteria of assessment involved, how little divergent opinion they offer. The college capsule texts are aimed at pleasing professors; they would be greater fun and more useful if they transcended the limits set by the teacher – not, I hope I am clear on this, by cramming more material but rather by eliminating more, and by presenting the rest more intelligently (i.e., by explaining their criteria, reporting controversies, etc.). They can start with the discussion of the aim and purpose of the course, the conflicting sets of fundamental principles employed by the various schools of thought involved, the intellectual or other significance of items or techniques which the student is supposed to memorize

and master; in brief, by spending more space on provoking thought, and less on memorization.

If we can teach the student on any level of educational philosophy, the theory of critical debate as a theory of learning and of scientific method, if we can give him the few rudimentary tools of self-education, including the requesting of instruction, the questioning of instructors, and the use of oral debate, of libraries, and of some writing facility, men he is bound to find teachers and peers with whom he can converse intelligently. This is the outline of one point of my proposal which can be elaborated in more detail. The details should be put to empirical test and improved by trial and error and by public discussion. The question which is harder to answer is, who should do the job of disseminating these ideas, of pooling experiences, and of disseminating empirical debates on improving them? I recommend neither fighting the (general educational) system from the outside, nor fighting it entirely from the inside, but rather building an independent informal movement partly within the system in question. From the outside, the best battle is run by the free schools and experimental schools, and the movement I propose to construct should keep in touch with them. But millions of students today suffer from pressures that will not be alleviated by the mere existence of free and of experimental schools. As to fighting from the inside, there is one phenomenon to beware of. It is the phenomenon of the utterly ineffective struggle of Communists and of Catholics who stay inside their organizations, of which they are critical, allegedly to fight its evils, as a way of achieving efficiency, but in fact out of sheer dependence. For, they may have some measure of intellectual independence from their organizations, but no emotional independence. In such cases, the criticism they level is rather impotent. If the dependence is technical – say, financial – the situation is more hopeful; and, of course, when there is no dependence, the freedom to act from within may indeed be useful. The school reform movement should be a liberal movement; as such, it wants no martyrs and no retributions. The reform should cause as little pain as possible to either reformer or defender of the old ways; only the student's right not to suffer unnecessary boredom and everyone's right to the freedom of debate should be reinstated and guarded. The burden of much of the preliminary work can fall on the shoulders of tenured university professors and tenured established teachers and on the staff of educational research institutions. Moreover, these people should benefit from the reforms at once. Researchers will be able to view their activities as empirical researches, promote new kinds of research publications, similar to teacher evaluation literature, teachers' educational literature, and learned educational journals all wrapped together. Professors should benefit from this too by canceling the curriculum in every course they teach and by making training for independent work the cardinal part of every course they teach, beginning with the discussion, in class, of the agenda of the course itself and teaching the class to draw an agenda. The greatest burden on professors is reading inadequate student material such as term papers and exam papers. Admittedly, even adequate student material can be a burden when it comes in large quantities. But this is barely a problem since when it does

come in large quantities professors employ graders. Graders may pose a problem, but this is solvable if the professor decides clearly what he wants. The reason that inadequate papers are so problematic is that the professor tries hard to find what the student wants, which shows that he does not know what he himself wants. Suppose he decides to grade papers low without putting too much effort into reading them when he discovers that they are hard to read. If students know this in advance – as it is their right – then they will adjust. It turns out that if students believe a professor, they will consult him about his requirements; and in turn, he will read their papers with them, sentence by sentence, and they will work together on the rewriting. There will be much useful work but there will be no sense of frustration – at least not the sense of frustration one experiences reading badly constructed sentences when the semester is over and chances to meet the student again are very low. And if one has too many students to teach, one can teach one's graders to teach them, or do the exercises in the classroom instead of giving dull lectures.

This does not apply to teaching assistants. Every teaching assistant who is worth his salt knows that if he does a routine bad job he is O.K., but if he experiments some student is bound to complain and make trouble by a simple complaint (and complaints are randomly distributed), regardless of the rights and wrongs of the complaint itself. It is wrong to tell the teaching assistant to be a coward and wait till he has been established; it is also wrong to tell him to get into trouble and lose his job. There are various ways to cope with this. In my college (Boston University College of Liberal Arts), freshmen seminars were instituted [in the late sixties] for the express purpose of encouraging instructors – mostly teaching fellows – to experiment. This effort was almost entirely a failure and was soon brought to an end. The teaching assistant has to learn how to do a routine job with minimal effort, how to improve it wherever he is covered by the regulations (every member of the movement should be advised to know the regulations of his institution as well as possible and to use all the liberties the system offers), and how to use spare time to enlist the good will of those students who wish to experiment while allowing the rest to use the old method with impunity. He can offer some reward for the new ways, but if he does this significantly, he is bound to cause strong ambivalences in students who favor the old method – and they will complain. They will say there is injustice but they will thereby express the pain of ambivalence. On the whole, members of the reform movement should be scrupulous as to fairness, especially fairness toward the upholders of the traditional modes and values; but they should do everything they can to raise discussion aimed at improvement without thereby risking their own jobs. And they should play down, as much as possible, the whole idea of rewards. All rewards in education are very degrading. If education is oriented to pragmatic matters, such as vocational training, surely the reward, or rather the expected reward, lies outside the educational system. In as much as education offers internal rewards, there are none greater than the growing sense of dignity and of pleasure in self improvement. The only reasonable function of grading is to help young students learn to assess themselves. Today, grading, especially in large colleges, hardly helps

in this direction. And the outcome is mistrust between student and faculty. Dignity must be preserved above all.

Those who are willing to promote dignity in all the communication channels open to students, faculty, and staff, all those who are willing to open new channels of communication, pool experiences, and disseminate new results, can build the movement and force the system to become more rational and more humane. Their message should be that we can treat the student as an equal, that is to say, respect his wishes – even though this will impose on us the possibility that he will reject the curriculum offhand and without even allowing us to protest.

CONCLUSION

Let me describe the place of my view of educational reform in my social philosophy in general. The most important part of my social philosophy is liberalism. But I dissent from the liberalism of the Age of Reason as simplistic and somewhat Utopian. (See my *Towards a Rational Philosophical Anthropology* of 1977.) I consider most of the curriculum not so much a great evil as an utterly redundant one and as a hindrance and impediment for educational experimentation. But I do not think that school will be, or should try to be, Utopian to any degree. On the contrary, the real troubles of schooling will come to the surface when the silly and redundant ones have been done away with. For example, there is the law of the land, and it is far from perfect, and it operates in school both generally and in specific educational acts and administrative rules and regulations – especially in financial matters. As another example, if school abolishes the curriculum, the law of the land will impose some part of it – as it does now even though less conspicuously so, of course. Thus, those who wish to practice skills, whether masonry or medicine, will have to pass certain examinations to qualify. These will never be quite adequate, though they need not be as inadequate as they are these days. With respect to the last example, students need not stay in the classroom, and forcing them to do so is criminal folly; but the law requires, rightly or wrongly, that they stay on the premises of their chosen school so many days a year. And so on. But pressures from society can be met by student and teacher together in co-operation, not by teachers transmitting them to students. It is the teacher's volunteering to be society's instrument that must be abolished, and by the teacher himself.

I do not know when this will take place. I do not know for how long we will have to endure compulsory instruction and the detailed, largely boring curriculum. Perhaps a generation or two must pass before the desert generation passes away and a new breed of administrator and faculty develops who will be able to handle their school's affairs with dignity. Possibly more and more free or experimental schools will open, public and private, more and more high schools and small colleges will cancel exams and go even more boldly experimental. But today, millions of school children and college students are facing years of boring classes with umpteen multiple-choice exams, and similar draconic devices. Of these, millions can learn to suffer less if they are told that some educators view their suffering as unnecessary and unjust.

Millions of students will be less miserable if they hear about liberal or egalitarian teachers, and if they learn that giving a random answer or a plausible answer in a multiple-choice exam raises one's chances of success (except sometimes in exams with penalties for errors). The application of the calculus of probability to multiple choice exams is child's play, and learning it is useful for this and for other purposes in life as well. We have to tell those who suffer from exams what we think of exams and that sometimes we know how to defeat them. This is a small practical matter, but for present victims it may be an urgent matter of some import. Before I close, let me say the obvious. Why am I against multiple-choice exams, whether in high school or in the national board exam for candidates for medical degrees? Why am I so opposed to the general educational system? My reason is this. Memorizing has proven futile. Most of the curriculum has proven harmful. Teachers use techniques like exams or multiple-choice in a desperate effort to cope with an impossible situation, doing what is not of any use, partly from not knowing what to do, partly from fear that if they experiment they may be punished. What we need is an educational system where the exchange of ideas and criticism are welcomed, criticism of any quality and from anywhere, including from students. This can be encouraged only where experiment is encouraged, if not rewarded, and where responsible experimentation is protected against penalty when it fails. But we need clear criteria for responsible experiments – criteria which should be independent of questions of success or failure. And we need a method of pooling experiences to avoid repeating old errors, and certainly to abolish present methods, such as memorizing, based on long-refuted educational and psychological theories. The idea of a democratic responsible citizenry should make us hope for an active student body, not for passive nice kids; attempts to make students passive channel their excess energies into hostility and violence. Teachers ought to be protected from student aggression, and then they can welcome clashes of ideas with them to everyone's benefit, particularly to the benefit of all who now suffer from boredom and who would thrive on intellectual activity. Above all, we need trial and error and the pooling of the results for public benefit. I sincerely hope that the present institution [The Ontario Institute for Studies in Education] and the present journal [Interchange] will serve the public to this end.

NOTE

The author is grateful to Judith Buber Agassi and Daniel A. Greenberg for comments on an earlier draft and to members of the original audience at OISE in 1970 for their lively discussion.

REFERENCES

- Agassi, J. (1977). *Towards a rational philosophical anthropology*. Dordrecht: Kluwer.
 Holt, J. (1982). *How children fail*. New York, NY: Delta/Seymour Lawrence.
 Provincial Committee on Aims and Objectives of Education in the Schools of Ontario.(1968). *Living and Learning: The report*. Toronto: Newton Pub. Co.