

ON THE ORIGINS OF SOCIAL JUSTICE : DARWIN, FREIRE, MARX AND VIVEKANANDA

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Abstract:

This article examines the fundamental reasons for educational research and practice in social justice from evolutionary, ideological and philosophical viewpoints. The tension between nihilistic² and empathetic tendencies within humanity's evolution is used to reflexively examine the origins and causes of inequity. The relevance of the works of Paolo Freire, Karl Marx, and Vivekananda for contemporary social justice research is examined.

WHY SOCIAL JUSTICE IN MATHEMATICS EDUCATION?

This ambitious book has finally reached completion and brings to fruition the hard work and initiatives of many individuals scattered across the globe. Editing and compiling this book has not simply been a learning experience but one of increased awareness on the inequities and social injustices inherent within institutional and societal mechanisms and the complexities of addressing these issues within an educational context. Although the title clearly indicates this book is about international perspectives on social justice in mathematics education, in my view it is really a book about our attempt to create *Meaning*.

A nihilist would question: Why social **justice**? In other words, what is it about society and education today that is broken and needs fixing or needs to be **adjusted**? It is a basic fact that life around us constantly reveals inequities such as rich versus poor; the educated

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² *Nihilism is a philosophy written on by Martin Heidegger as well as Friedrich Nietzsche. Although the writings on Nihilism of these two eminent philosophers have been subject to apposing interpretations, the basic premise of nihilism is that the world or existence as we know it is ultimately without any objective meaning, with obvious implications for organized religion, morals and ethics. Nietzsche's nihilistic position stems from the frustration in our search for meaning. In Russia, nihilism was associated with revolution that rejected the authority of church and state. I view the Existentialism movement of the 20th century as an attempt to resolve the problem of meaningful existence if one embraced nihilism.*

versus uneducated; those in power versus those without power; wealthy countries versus poor countries; citizens versus guest/transient workers; higher social standing and mobility versus being stuck in abject status quos; affluent neighbourhoods and schools versus ghettos and the remnants of social Darwinism; ad infinitum.

While most of the world is caught up in dealing with the excruciating minutiae and the vexing exasperations of day-to-day life simply to survive, we in academia are in the privileged position to ponder over the bigger questions confronting humanity. Why do inequities exist in the first place? What are their origins? Are the chapters in this book simply attempts at "patching up" things that are in essence atomically broken., i.e., an allopathic attempt of getting rid of symptoms so we don't have to deal with the real objective roots of problems. Another analogy is that of surgical procedures done on an ad-hoc basis to remedy defects that arise as opposed to caring for the well being of the whole and getting to the root of problems. Or are these chapters, well intentioned attempts around the world to present arguments for the necessity to address social inequities via mathematics education, i.e., to give a deeper meaning to the purpose of education. A nihilist would choose the allopathic (surgical) answer whereas the empathetic individual would choose the latter. Most of us find ourselves somewhere in between, in perpetual but necessary tension to solve the bigger problems around us.

The common bond shared by all the authors in this book is the fact that they are predominantly mathematics educators interested in changing the status quo contributing to the continuation of social injustice in different regions of the world. So, I pose again to the reader the question about the real origins of inequity and injustices within educational and societal mechanisms. Some positions are now presented.

The Darwinian explanation suggests that inequity is simply one of the many natural mechanisms that have arisen over the course of our evolution. If we view ourselves as creatures whose sole purpose in life is to survive and to have progeny, then it is evident that the competition for the same natural resources would leave others in the wake. The strictly Darwinian explanation would suggest that certain groups are doomed to perish simply because they are unable to cope with changes occurring in their environment. Unlike other mammals, we tend to hoard natural resources, much more than we can possibly use and at the same time, we also exhibit tendencies towards altruism which are paradoxical and unexplainable in strictly biological terms. In fact, Charles Darwin (1871) in the *Descent of Man*, posed the question whether the phenomenon of moral behaviour in humans could be explained in evolutionary terms, viz., natural selection. The evolution of social systems (religious, ideological, political) of various kinds are not explainable strictly in Darwinian terms. Comte (1972) proposed a stage theory for our social evolution in which humanity moves from a theological stage onto a metaphysical stage onto a "positive" stage. It is too difficult to explain the meaning of the third stage, but simply put, we reject absolutism of all kinds and we strive for knowledge based on rationality.

The present day economic inequity in the world is best illustrated by the fact that many universities in the West have larger budgets than the GNP of many nations in Africa, Asia and South America. Despite the current state of affairs we are also creatures of ideas who over the course of our evolution have moved away from a strictly clannish and genotypic connection to a memetic³ connection. We conglomerate over common ideas or ideals as evidenced in the spread of the numerous great world religions, which link together people

³ See Richard Dawkins (1964) *The Selfish Gene*

across a spectrum of class, culture, race, socioeconomic status and nationality. This very book is a memetic product. Similarly ideologies such as Marxism connect people from diverse socioeconomic and cultural backgrounds. Even the so-called phenomenon of "globalization" is nothing new from the point of view of history. There is sufficient historical evidence that even in periods when means of transport and communication had not been developed, oriental civilization penetrated into the West. Iran and Greece were in contact with each other, and many Indians found their way to Greece and vice-versa through this contact (Radhakrishnan, 1964). Asoka's⁴ missions to the West, and Alexander's influence on Egypt, Iran, and North West India, produced a cross-fertilization of cultures.

Another big, intensive, but relatively "localized" process, which we may, also call "globalization", occurred in Europe, in the expansion of Christianity in the Middle Ages, in the shadow of the Roman Empire. In the late Middle Ages, States began to take shape as components of a new form of Empire. The scenario resulting from this process of European "globalization", prevails until now. In the sort of jig-saw puzzle which characterize the political dynamics present in this process, the idea of a Nation became strong. States and Nations are different concepts, as well as Political Dynamics and Cultural Dynamics. The political dimension of this process prevailed and something vaguely called State/Nation began to take shape as the primary unit of the European scenario. The Empire which emerged in the Late Middle Ages and the Renaissance as the assemblage of such State/Nations, although fragile, mainly due to power struggle, favored the development of the ideological, intellectual and material bases for building up the magnificent structure of Science and Technology, anchored in Mathematics, supporting a capitalistic socio-economic structure. The expanding capitalism, supported by religious ideology and a strong Science and Technology, had, as a consequence, a new form of globalization, now effectively engaging the entire Globe. The great navigations and the consequent conquest and colonization, completely disclosed the fragility of a possible European Empire. The internal contradictions of State, as a political arrangement, and of Nation, as a cultural arrangement, emerged, in many forms (Sriraman & Törner, 2007).

Religious and linguistic conflicts, even genocide, within a State/Nation became not rare facts. Indeed, they are not over. As a result of all these processes, Education was, probably, the most affected institution. Educational proposals, even curricula, are noticed in this era. The influence of national characteristics interfered with objectives derived from the new World scenario. The development of Science and Technology, obviously related to the educational systems, was unequal. Interchanges intensified. The Industrial Revolution made Science and Technology a determinant of progress. Hence, the enormous competition among European States, which intensified during the 19th century and early 20th century, raised Science and Technology, which became increasingly dependent on Mathematics, to top priority. One terrible consequence of this competition between European states was the advent of colonization, the consequences of which the world is still very much experiencing.

Although many countries in Asia, Africa and South America became "free" from the yoke of colonialism in the last century, this freedom left in its wake uprooted peoples when colonial masters started drawing lines on maps to "equitably" partition land in various regions of the

⁴ Asoka (c. 299 – 237 BCE) is credited with the establishment of the so-called "first" Indian empire, accomplished through decades of bloody conquests. His deep remorse over the carnage at Kalinga led him to embrace the peaceful doctrines of Buddhism. Under his protection, Buddhism flourished and numerous Buddhist texts were written. Asoka also sent numerous emissaries of Buddhism to places like South East Asia, Egypt, Libya, and Macedonia, which resulted in the "golden" age for Buddhism.

world. Hopefully the reader realizes the irony in my previous statement. There was considerable loss of subsistence lifestyles, loss of indigenous cultures and traditional knowledge. The consequences of colonization were not any different in North America and in Australasia. The outcome of the colonial period of our history was Education as an Institution and a new economic structure being implanted in various regions of the world with the explicit purpose of perpetuating the very structures created to maintain colonialism, namely oppression of the many by a few. Indeed Karl Marx and Friedrich Engels' monumental writings⁵ address issues such as exploitation of workers within a capitalistic economic system and the problem of materialism confronting humanity, which would inevitably lead to class struggles and revolutions. Many of the foundational writings of social justice can be traced back to the ideas proposed by Marx and Engels. Today's study of the ecological footprints left by the industrialized nations reveals the obscene differences in resource consumption⁶ between rich and poor nations, a natural consequence of materialism run amok as predicted by Marx and Engels.

Paolo Freire (1921-1997), the Brazilian educator and social reformist, came of humble backgrounds. His book *Pedagogy of the Oppressed* (Freire, 1998) is perhaps the most frequently cited Marxist-influenced⁷ work in educational literature. Freire (1998) addressed the power dynamics between the oppressed and the oppressors (including the dynamic between teacher and student), and that the way toward liberation is through political movements and political struggle, of which literacy is but one part. Thus his emphasis on *writing*⁸ the world, is beyond literacy. Clearly, literacy (i.e., reading the world) is also an integral and necessary part of this process. Freire's banking concept holds that students are knowledgeable beings with the intrinsic capacity of creating knowledge *with the teacher*, as opposed to being empty buckets of ignorance or simply "files" or automatons dependent on the teacher's absolute authority to learn and construct new knowledge. It is also important to note that Freire emphasized critical literacy as opposed to functional literacy. The Organization for Economic Co-Operation and Development (OECD, 2004) defines mathematical literacy as an individual's capacity to identify and understand the role that mathematics plays in the world. Further literacy involves making well-founded judgments and using and engaging with mathematics in ways that meet the needs of each individual's life as a constructive, concerned and reflective citizen. It should be noted that countries like Brazil, China and India are not a part of OECD but are key players in globalization with large vulnerable populations. The essential question is: Does the OECD represent only the interests of the citizens of developed and wealthy countries who are its members or does it also take into consideration the need for equitable and sustainable development with non-members, and more importantly create an awareness of this inequity to students in countries which participate in the PISA⁹. In spite of the good intentions of the OECD, is the push for mathematical literacy around the world simply another mechanism at propagating functionality in the masses as opposed to critical thought and liberation? For instance do large scale tests like PISA include problem solving and problem posing items which make students quantitatively and qualitatively analyse (1) trends in immigration data within OECD and between OECD and non-OECD countries, the causes and consequences thereof; (2) reported incidences of hate crimes against minorities and immigrants in OECD countries, the

⁵ Karl Marx, Friedrich Engels, *Gesamtausgabe*, Edited by the Institut für Marxismus-Leninismus

⁶ *World Resources 2000-2001: People and ecosystems: The fraying web of life. United Nations Development Programme, United Nations Environment Programme, World Bank, World Resources Institute.*

⁷ It is unclear whether Freire was Marxist, or the book was a Marxist work. Freire was clearly influenced by Marx and Che Guevara. In the introductory section of the book Freire wrote: "I am certain that Christians and Marxists, though they may disagree with me in part or in whole, will continue reading to the end."

⁸ My discussion with Rico Gutstein and Ubi D'Ambrosio was very helpful in understanding Freire.

⁹ Program for International Student Assessment

causes and consequences thereof; (3) comparative data on resource consumption between OECD and non-OECD countries, the reasons for huge discrepancies and their consequences; and (4) data revealing trade deficits and surpluses between OECD and non-OECD countries, the causes and consequences thereof.

Freire (1998) suggested that pedagogical practices should support education for liberation and emphasized problem-posing pedagogies that strive "for the emergence of consciousness and critical intervention in reality" (p.62). Problem posing pedagogies are necessary if the goal of education is to challenge inequities. Freire's writing suggests a pedagogy which promotes greater social awareness or a social consciousness appropriate for initiating major shifts in thinking. An outstanding example of this pedagogy in practice is Gutstein's (2006) work *Reading and Writing the World with Mathematics*. Gutstein's work also points out the obstacles to such a pedagogy within a school system, particularly institutional resistance from administration and other stake holders within a school district.

A nihilist again poses the question: Can emancipatory and social justice pedagogies really free individuals from oppression at a societal level? How can this be possible without it occurring at the individual level first? Freire (1998) himself wrote that the central problem was "How can the oppressed, as divided, unauthentic beings, participate in developing the pedagogy of their liberation? Only as they discover themselves to be "hosts" of the oppressor can they contribute to the midwifery of their liberating pedagogy." Clearly Freire is stating that the oppressed adhere to the oppressor and have to break free. If individuals do not subjectively and intrinsically feel free, how can any educational or social mechanism make this happen no matter how good the intention? Cho & Lewis (2005) recently re-emphasized the aforementioned essence of Freire's pedagogy from the point of view of psychology and the problems with the attempts by Marxist theorists to transform Freire's "pedagogy of the oppressed" into a "pedagogy of revolution". They write that "oppression has an existence in the unconscious such that those that are oppressed form passionate attachments to the forms of power that oppress them" (p.313), and it is necessary for social justice researchers and Marxist theorizers to recognize and address this important issue. Cho & Lewis (2005) formulate several challenges¹⁰ to Marxist theorizers as follows:

...part of the discomfort with "revolutionary pedagogy", is that the project of liberation often appears to be presupposing universal notions of what it means to be oppressed, liberated, and how this movement is to be made- often the problem lies in Freire's emphasis on material relations and not on the issue of patriarchy or colonization....[w]ith no clear resolution to the issue of authority, liberatory pedagogies can portray particularist notions of oppression and liberation in universal was and to impose these visions of oppression and liberation upon others through a kind of vanguardism, which can ironically replicate relations of oppression other than overcome them thus returning us to the problem with which Freire begins his analysis in the first place. (p. 314)

In India, the problem of individual liberation has been addressed within Hindu philosophy by numerous scholars, especially social reformers in the 19th and 20th centuries. Vivekananda (1863-1902) belonged to a branch of Hindu philosophy called Vedanta (see Sriraman & Benesch, 2005), in particular to a special strand of Vedanta, which holds that no individual can be completely free unless every one else is also free (from oppression). In other words, we as individuals are obliged to act to better society. Vivekananda was able to move beyond the prevalent dogmatic caste system which characterized Indian society and propose a

¹⁰ Here Cho & Lewis are synthesizing the writings of Ellsworth (1989), Gore (1990) and Weiler (1991). These particular writings convey a completely different conception of the complexities of empowerment from the point of view of feminist pedagogy. See references.

theory of action which necessitated that each of us consciously act towards bettering the lot of our fellow humans, if our goal is to ultimately liberate ourselves and become enlightened.

From a Freirean perspective it is not possible to “empower people...”— the best we can do is to create conditions to facilitate, support people empowering themselves, and to work along side in common struggle. I prefer to view the individual chapters in this book from this perspective. The chapters can also be viewed as conscious and well directed action from the various authors aimed at education creating real *Meaning*.

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SOCIAL JUSTICE AND MATHEMATICS EDUCATION: ISSUES, DILEMMAS, EXCELLENCE AND EQUITY Bharath Sriraman. Dept. of Mathematical Sciences, The University of Montana, USA . & Olof Steinhorsdottir. School of Education, University of North Carolina-Chapel Hill, USA < steintha(at)email.unc.edu>. Some positions about the origins of inequity and injustices within educational and societal mechanisms are now presented followed by addressing the issue of the tension between excellence and equity within educational systems, east and west. In fact, Charles Darwin (1871) in *The Descent of Man*, posed the question whether the phenomenon of moral behaviour in humans could be explained in evolutionary terms, viz., natural selection.