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Which is More Fundamental: Outward Peace or Being True to Our Humanity?

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Abstract: How we perceive and define concepts should be a major concern for teachers and educators in general and for math teachers and educators in particular. This issue, however, is usually ignored or marginalised in curricula and classrooms, where textbooks form the major source of information, knowledge, meanings and definitions. The two words in the theme of this ZDM-issue – math and peace – are themselves good examples to explore. "What do we include in the math curriculum and what do we exclude, and why?" and "What do we mean by peace, and whose peace, and at what human and environmental cost?" are questions that the article raises and tries to point out how we should go about dealing with them.

The article challenges the absolute meanings of concepts and stresses the importance of discussing meanings only within context. This concern requires giving teachers and students a greater say in the curriculum, to explore and discuss issues that affect their lives profoundly. The article challenges current values and goals, and suggests what it considers more fundamental values. In particular, it suggests that when there is conflict between peace and being true to our humanity, the latter should be given priority as a guiding value.

Kurzreferat: Was ist wesentlicher: äußerer Friede oder unserer Menschlichkeit gerecht zu werden? Die Frage, wie wir Begriffe wahrnehmen und definieren, sollte ein Hauptanliegen von Lehrern und Didaktikern im allgemeinen und für Mathematiklehrer und -didaktiker im besonderen sein. Dies wird jedoch in Lehrplänen und im Unterricht meistens marginalisiert, und die Hauptquelle für Informationen, Wissen, Bedeutungen und Definitionen sind Schulbücher. Die beiden Worte im Titel dieser ZDM-Analysen – Mathematik und Frieden – sind zwei gute Beispiele für entsprechende Untersuchungen. Dieser Beitrag wirft Fragen auf wie "Was gehört in den Mathematiklehrplan und was nicht, und warum?" und "Was verstehen wir unter Frieden, wessen Frieden, und auf Kosten welcher menschlicher und umweltbezogener Aspekte?" und er versucht aufzuzeigen, wie mit solchen Fragen umgegangen werden kann.

Der Beitrag stellt absolute Bedeutungen von Begriffen in Frage und betont, wie wichtig es ist, Begriffe nur im Zusammenhang zu diskutieren. Dieses Anliegen erfordert es, Lehrern und Schülern sowohl ein größeres Mitspracherecht im Hinblick auf Lehrpläne und Curricula zu geben als auch die Möglichkeit, Themen zu untersuchen und zu diskutieren, die ihr Leben wesentlich beeinflussen. Werte und Ziele in der heutigen Zeit werden in Frage gestellt und grundlegendere Werte vorgeschlagen. Insbesondere wird die Ansicht vertreten, daß, falls eine Entscheidung zwischen Frieden und einem Gerechtwerden unserer Menschlichkeit zu treffen ist, letzterem der Vorzug gegeben werden sollte.

ZDM-Classification: A40, D30

External peace and being true to our humanity are not always compatible

One of the worst types of war is one which takes the form of marginalising and silencing people. At the same time, however, one way of achieving external peace is by silencing people. But silencing people unjustly means either killing the internal human flame in them or creating

an internal "war" within each individual who feels the injustice. In this sense, peace and dignity don't always go hand in hand. Examples from history abound. One of the most famous cases is the story of Jesus himself, the prophet of peace. His call to "love one another" and his proclamation of "... good news to the poor ... release to the captives ... recovery of sight to the blind ... let the oppressed go free ..." led to his crucifixion, i.e. to violence and "war" against him.

The case of the indigenous peoples of North America is another example of how external peace was achieved at the expence of humanity, of how peace and humanity are sometimes incompatible, of how one of them under certain situations has to be sacrificed. We cannot talk about putting an end to wars in the sense the European settlers put an end to war in North America: by wiping out almost the whole indigenous population there. The case of the Blacks in South Africa under Apartheid is a third example. The attempt to achieve peace was done by dehumanising and silencing Blacks. In my case as a Palestinian, the implementation of the current "peace" agreement is being translated on the ground by continuing (and legitimising) the stealing of Palestinian land by Israel, continuing the building of settlements, controlling water and movement, and imprisoning, torturing and humiliating people. Under current conditions, peace means remaining silent and accepting injustice and humiliation; i.e. losing our rights, our dignity and our humanity. This, obviously, is a very high price to pay for outward and superficial peace.

The point I am trying to make here is that we cannot talk about peace in an abstract or isolated way as if it is a separate and self-contained entity. "Peace" in many countries has been "achieved", but, in the process, people either have been crushed or are still boiling inside. Eventually, this type of superficial and outward peace will fall apart and humanity will bloom again. Asserting one's humanity and dignity means expressing one's voice and being ready to be punished for it, which means leading to violence. This raises the basic question: which is more fundamental, outward peace or being true to our humanity?

For me who has been a victim of both – never felt peace in my homeland, Palestine, and constantly felt the crushing of my humanity – I am convinced that the value which is more fundamental is being true to our humanity. In the final analysis a main purpose and challenge in our teaching of math – as well as in any other activity – is to be true to our humanity. By being true to our humanity, internal as well as external peace will eventually follow.

Put differently, war does not only take the form of armed activities by soldiers. In today's world, war against humanity often takes more subtle and far more dangerous forms such as dehumanisation, marginalisation, crushing people and forcing countries to follow the path set by the so-called development plans as defined and imposed by organisations such as the World Bank and IMF. Development during the past 50 years has meant, in practice, controlling and stealing resources of other countries as well as dismantling societies and crushing people, not through soldiers but through the use of "experts" and through supporting or installing local ruthless families or individuals

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who are ready to help in the process of controlling and transferring local resources outside the country.

No people or government in the world today is allowed to function or even continue to exist if it chooses a path which does not yield to the new "god": the New World Order with its crushing world market as its backbone in which less than 20% of the people in the world control and consume more than 80% of the resources. This mathematical-economic fact reflects what can probably be considered as the most totalitarian global system the world has ever known. No one and no country is allowed to divert from this path; otherwise they will be punished in this life, not in the other life! Nicaragua, Graneda and Aristede's Haiti (before the coup) are just a few examples. Sub-Sahara Africa is another example. A statement issued by All Africa Conference of Churches, marking the 50th anniversary of the World Bank and IMF (and launching the movement "Fifty Years Is Enough"), carries these words, "Every child in Africa is born with a financial burden which a lifetime's work cannot repay. The debt is a new form of slavery as viscious as the slave trade." Put differently and concisely, current development plans leading to a world market driven by profit at any cost is the biggest threat to humanity and to diversity. In addition to marginalising the majority of the world's population and stealing their resources, it embodies abusing nature and emptying people, words and things of their essence.

The double role of math education: Exposing dangers and building a saner world

The math embedded in situations and examples such as those mentioned above is tremendous, both in terms of exposing dangerous trends and in being a part of the basis on which we can build a saner and more just world. Aspects of math which are embedded in such situations include the quantitative aspect, the role of definitions and measures, and the role which math education can play in helping people see wholes and relationships as well as helping them create in their imaginations alternatives for different worlds. The teaching of mathematics can utilize these aspects in the processes of exposing and building referred to above.

Examples:

- (1) To show the drastic and dangerous impact of TV on children, students can measure the amount of time they spend in front of TV, in addition to the "horror" programs they watch where conflicts are mainly solved through violent means including sophisticated deadly weapons made by the very science and math they study. In contrast to exposing such dangerous trends, math classes can also be used to suggest creative and meaningful alternatives in relation to how time can be spent, as well as to practice and produce peaceful and constructive alternatives to solving problems and conflicts.
- (2) A main factor in causing environmental, economic and social problems in many countries is the level of consumption among the affluent. A rose planted near Bogota, Colombia and sold in Manhattan, New York is an example which embodies aspects of math such as quantitative

methods and seeing connections among various phenomena. It embodies political, economic, social and environmental problems and threats. The example of roses can be a meaningful and relevant theme in the math curriculum in the schools of Colombia. [It is worthwhile mentioning here that the US government – in the 1992 Earth Summit in Rio de Janeiro – threatened to pull out if the conference organizers insisted on discussing the issue of the relationship between the level of consumption in the US and threats to environment in many countries, especially in Latin America.] Using math to expose trends which threaten human societies should be part of the math curriculum everywhere. It is relevant, powerful and revealing. It also illustrates the urgency of trying to build a saner world.

- (3) One of the least stressed and practiced aspects of the process of learning, and which math can be effective in remedying, is constructing one's own understanding and meanings of reality as people experience it. One small example can help to illustrate. As Head Supervisor of math instruction in the schools of the West Bank in the 1970s, I used to visit schools and ask questions, such as "what is a point?" The most fascinating answer came from a 7-year old girl: a circle without a hole!
- (4) The amount of money spent on harmful, wasteful or junk products, even in small and poor communities, is tremendous. It is usually very surprising and shocking for people to realize how much their small community spends on, for examples, cola or cigarettes. Such facts can and should form an important part of the math curriculum. To find out, for example, how much is spent on cigarrettes in a particular village requires students to "design" a study, gather data, organise it, make estimates, etc.; i.e. use various aspects of math. In addition, involving students in community issues can be very effective in dealing with subtle "wars" waged against human beings by cigarette, cola and TV industries. Discussions of such topics in math classes could open the minds to real needs and how to use available resources more wisely. Such discussions also point to how people are often silenced by consumer goods "forgetting", thus, injustices and threats. They could also raise the question of scarcity of certain essential resources which could lead to conflicts and absence of peace, not only between nations but also among individuals and groups.
- (5) There is nothing more confining to the mind or the spirit of an individual or group as being stuck with one option or definition in one's mind. Mathematics teaching can be effective in creating alternatives in people's imaginations. Creating such alternatives is the essence of what it means to be a free and creative thinker. A person is free if s/he is able to create alternatives to what is being imposed or to what is considered the best or only way to live one's life. Dominant definitions and measures as well as alternative ones can and should be an ongoing theme in math classes at all levels. Definitions and measures are crucial in determining the way we judge, understand, perceive and conceive the world. Students should be encouraged to challenge ready meanings of terms and try to give their

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own understandings of mathematical concepts as well as their own examples to illustrate them. I will again choose a question I used to ask students, to illustrate: "Can you give me an example where 1 is not equal to 1?" Their immediate response usually was silence and looking at their teacher with bewilderment. Once their imagination was relaxed, however, examples from their experiences poured out. It is extremely important for students to feel that they are creators of meanings; that they "own" the meanings of the words they use. In my experience in teaching math for over 25 years, critical thinking meant thinking within context, including the values we are guided by.

The above examples embody forms of war which usually are not stressed. They also remind us of aspects of peace which also are usually not stressed such as having peace with one's self (internal peace), with one's body and with nature.

Mathematics as part of building human response to disastrous trends

A major role of math education should be to contribute to the building of a human response at a world level in the face of the current globalization process with its many destructive and dehumanising trends which are increasingly gaining momentum around the world. In order to do so, mathematics has to be contextualized in the way we teach it. We need to rethink the content, themes and methods in math education as well as social interaction within classes and schools - world-wide as well as in each country. We need to dialogue about the purpose and values of math education, in general as well as in each country. Mathematicians and math educators in each country should get into dialogue as to what are the main themes of disrupting and distorting people's lives and environments and include that in the math curriculum. The theme in one country could be related to water, in another to the raw materials and industries in their relationship to the outside market. In a third country, the theme could be related to problems of transportation or to the man-built environment or to patterns of consumption; and so on. In each case, thinking of and producing alternatives to what is taking place should also be part of the curriculum.

Math as a field of numbers, definitions, measures, patterns, relations – and of the use of the imagination – is well-suited to build not only an awareness of today's world but also to create the conditions for a saner world in the future. In this sense math education could be connected to our sense of responsibility towards ourselves, others, future generations, and nature. It could help in seeing the connectedness of what we do today to what we face to-morrow

One important way of helping to make math become more personal and more contextualized is by including writing as an integral part of teaching it. This does not only make it more meaningful, but also anchors it in the realities and experiences students live in.

Summary

Someone once said, "Human beings are much too clever to survive without wisdom." Seeing connections among phenomena and recognizing what is essential are part of wisdom. Mathematics is well-suited to help us see such connections and essentials. The concept of peace can neither be looked at in isolation nor as more essential than human dignity.

Current forms of globalization, where profit, winning and control form the sole values, can only lead to misery for the majority of people. Peace which justifies and preserves this misery is not what we should aspire to or what is even possible. Math education can be effective in realizing such threats as well as creating a saner world.

Peace is a goal sought by all peoples. In this article I tried to argue that peace can be achieved only by being true to our humanity.

Being true to our humanity means respecting nature, feeling responsibility towards nature and towards people (including compassion for one another), having commitment to justice, respecting the integrity of creation, and looking at ourselves as contributors to the making of our future.

How can math education contribute to this, i.e. to peace and to being true to our humanity? I believe it can do so:

- by including values in the teaching of math and stop claiming that math is universal and neutral;
- by looking at math not as consisting of separate skills and topics but as a field which helps draw "mental maps" in our heads of the world we inhabit; i.e., see connectedness in life;
- by revitalising terms which are usually suppressed such as wisdom and practice, and by creating terms for practice which are usually made invisible;
- by defining terms in our own words and redefining others:
- by starting, in our teaching of math, with life and returning to it often rather than starting, as it is customary, with concepts and theorems which are alien and meaningless to students.

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This collection of articles which I wrote could help elaborate on some of the themes in this article.

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