THE ETHICS OF MATHEMATICS: IS MATHEMATICS HARMFUL?

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Introduction

Mathematics is a very rich and powerful subject, with broad and varied footprints across education, science, culture and indeed all of human history. Both academia and society in the large accord mathematics a very high status as an art and as the queen of the sciences (Bell 1952). Mathematics has a uniquely privileged status in education as the only subject that is taught universally and to all ages in schools. Behind this elevated status is the hidden ethical assumption that mathematics is an unqualified force for good. Is this assumption correct? Does nothing but good flow from mathematics? In this chapter I argue that mathematics does harm as well as good. My claim is that mathematics in school has unintended outcomes in leaving some students feeling inhibited, belittled or rejected by mathematics. In sorting and labelling learners and citizens in modern society, mathematics reduces the life chances of those labelled as mathematical failures or rejects. In addition, even for those successful in mathematics, mathematics serves as a training that shapes thinking in an ethics-free and amoral way. Thus mathematics supports instrumentalism and ethics-free governance. This is exploited in warfare, psychopathic corporations, the misuse of humans and the environment, and in all acts that treats persons as objects rather than moral beings always entitled to respect and dignity. I conclude by suggesting solutions. To avoid or remedy the negative effects in schooling we need to attend more closely to the causes of success and failure, and become fully aware of how these have far-reaching impacts on learners. Further, in order to forestall the harmful effects of mathematics in society we need to teach the social responsibility of mathematics, through including philosophy and especially the ethics of mathematics alongside mathematics itself. All students of mathematics and fully fledged mathematicians should be able to view the uses and applications of mathematics critically, seeing the mathematics in play and understanding the ethical implications of the issues involved, including both benefits and harm.

As a mathematician myself, someone who has devoted his professional life to furthering the teaching of mathematics in school and university, I might be expected to be among the last to question the value of mathematics. However, I believe that both the place of mathematics in the world and the benefits it brings are strengthened through looking at mathematics as a critical friend. This entails not only lauding and feeling pride at the benefits mathematics brings but also recognising the harm it can do, and not shying away from it. Acknowledging that there are negative outcomes opens the doors to solutions, to possible means of ameliorating and rectifying the damage brought about through mathematics….

(An excerpt of the full article)