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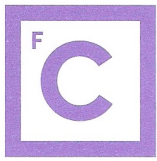
On the doctoral thesis *History and current state of recreational mathematics and its relation to serious mathematics*, by Tereza Bártlová

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Tereza Bártlová's thesis aims at understanding recreational mathematics (RM) by looking at its history and at the way it is embedded in the whole building of mathematics. Both approaches constitute difficult tasks. RM goes back several millennia. Throughout the ages it has influenced "serious mathematics" in many ways, and, of course, it also reflected the development of mathematics.

The identification of RM material along history is no simple matter. One problem can be recreational and used as a form of pure entertainment at some point in time, but not after general methods of resolution come along. Eventually, such a problem might become an exercise at the end of a chapter in a textbook.

Some problems from Babylon and ancient Egypt are considered to be recreational, as they could never serve any practical purpose, as Bártlová points out. Greek mathematics, however, is very similar, in its methods, to our own mathematics. It is almost always considered to be very "serious mathematics". In her work, Tereza uses the three famous classical problems of Euclidean geometry as examples of RM. Most of the body of mathematical knowledge created by the Greeks found practical application only many centuries after its creation (theory of prime numbers, conic sections, etc), which reinforces Tereza Bártlová's viewpoint. This position raises very interesting philosophical questions. Maybe in the future the author, among others, will address them. As a matter of fact, as Tereza travels through different ages and subjects, she opens paths for future research in a few other topics, which enriches her thesis.



On the other hand, Tereza Bártlová surveys the field of RM organized by scientific topic. This is also far from easy to do. It requires solid background in both RM and many areas of “serious mathematics”.

The many faces of RM show up in this work. The text on *Flatland* gives us an essay on RM related to culture and society, while *April fool's day hoaxes* show us how RM can be a pure and sophisticated form of fun, requiring critical thinking to be fully enjoyed.

Science centers, and some more classic museums, have very appealing physics activities, all very interactive, where the concept of “hands-on” rules. What about mathematics? How should the queen of sciences appear in such a context? As Tereza Bártlová proposes, this is the right context for RM. The recreations that come with games, puzzles, and problems promote the creative and rigorous thinking processes of mathematics in a ludic way. The pedagogical potential of RM is also considered in this thesis, and the need for further efforts in bringing RM to the classroom in relevant ways is emphasized.

After analyzing the scope and depth of Tereza Bártlová's thesis, I reached the conclusion that she will be very productive in this area in the future. She clearly has built a solid background in the field and her text suggests already several research lines worth pursuing.

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