

## Review of B.D.D. Volumes 19-20

Baruch Serman

Rabbi Adin Steinsaltz once compared the relationship between Torah and science to a rocky marriage, where the particular argument shifts from time to time against a backdrop of constant bickering. This may be true for some thinkers, but others, including the authors contributing to B.D.D., (*Bekhol Derakhekha Daehu*, Bar-Ilan's Journal of Torah and Scholarship), see the relationship as closer to that of a newlywed couple dreaming of building a harmonious and loving life together. Either way, the metaphor of a marriage is an apt one, especially in view of the complex and multi-faceted nature of the various links and bonds between the partners. These can range from the trivial – the husband and wife very often show up at the same parties – to the sublime, in the way their ambitions, goals and aspirations align as they build a home and life together.

All of these can be found in the BDD articles. One who takes both Torah and secular scholarship seriously always carries both with him wherever he goes. Uri Zur and Yehuda Ashkenazi (19 ב.ד.ד. גיא גאודסיה תלמודית, 19) bring their engineering skills to the Beit Midrash and show how an understanding of geometry and trigonometry can help make sense of the *sugya* in Eruvin discussing Rabban Gamliel's method of using a telescope (actually a hollow pipe) for measuring the depth of a valley or the distance of a plain.

On the other side, the computer scientists Yaakov HaCohen-Kerner, Ariel Kass, and Ariel Peretz (20 ב.ד.ד. מערכת לומדת המפענחת ראשי תיבות רב משמעיים בכתבים תורניים, 20) bring the problems of the Torah student to the lab and apply an algorithm (actually a suite of algorithms), using artificial intelligence and context based natural language processing, to find a better way to anticipate the correct interpretation of ambiguous *rashie tevot*, the abbreviations that can stump even the most erudite scholar and lead to misunderstandings in the reading of a text.

Attempts at synthesis of particular scientific ideas with Torah concepts can also be found in the collection of articles. Leo Levi (19 ב.ד.ד. טעמי המצוות והפסיכולוגיה המודרנית, 19) compares and contrasts the underlying ideas of psycho-analysis with those of Rav Yisrael of Salant, the founder of the Mussar movement. I also enjoyed Elie Feder's article (*The Application of Infinitesimals and the Foundations of the Calculus to the Law of Nullification*, B.D.D. 20) which discusses how the quest for a fundamental understanding the very small, which drove so many advances in mathematics and modern physics, is at the heart of an argument between Rabbenu Tam and the Riva regarding *bitul*, the question of what ratio of permissible to prohibited food is required in order for the former to nullify the latter and render the mixture *kosher*.

In combining disciplines, one has to be careful not to oversimplify the issues, resulting in a simplistic or superficial presentation of the subject. This was the problem with Dror Fixler's article comparing the use of the Internet to television viewing ( השימוש בטכנולוגיית האינטרנט ( לעומת השימוש בטלוויזיה, ב.ד.ד. 20). I believe that Fixler misses the mark on three points: Firstly, the significance of the Internet is far greater than he portrays. Already more than 10 years ago, in the earliest days of the Internet, Philip and Phylis Morrison wrote in an essay in *Scientific American* that the Internet represented nothing less than a quantum leap in human social evolution akin to the development of language or the Industrial Revolution. As we witness the fantastic growth of the Web (over a billion URLs are added each day!) and the corresponding democratization and accessibility of human knowledge, together with the integration of the Internet into all aspects life – social, intellectual and economic – we can only appreciate the prescience of the Morrises' insight. Secondly, the dark side of the

Internet is far more pervasive, far more perilous, and far more subtle than Fixler admits. We are just beginning to recognize the dangers of Internet addictions and the pernicious potential of social networks with their capability for forming no-risk, anonymous, and fraudulent relationships. Thirdly, the solutions for insuring appropriate Internet use are extremely complex and will certainly require a mix of education, technical ingenuity, parental/professional/Rabbinic involvement and possibly legislative intervention. How the *halachic* community will rise to this challenge is a matter that needs to be addressed in a much more comprehensive and thoughtful way.

The best article, in my opinion, was Ari Zivotofsky's discussion of the controversy surrounding the permissibility of eating swordfish (*The Turning of the Tide: The Kashrut Tale of Swordfish*, B.D.D. 19). This presentation represents the best of Torah and Science in their shared goal of seeking truth in a thorough, meticulous, and objective manner. Zivotofsky's *tour de force* lays out the subject matter in all its detail, taking us from the *halachot* of what makes a fish kosher, to the biology of fish scales and how the different categories of scales can (or can't) be mapped to those *halachot*, and finally through the debate between Rabbi Tendler, who broke with tradition to prohibit swordfish, and the unlikely combination of Rabbis Unterman (the Chief Rabbi of Israel) and Klein (a leading figure within the American Conservative Movement) who fought to uphold the convention of permitting the delicacy. Zivotofsky reviews the history of how this argument played out and, without taking sides, comes to the conclusion that politics had at least as much influence on the ultimate accepted *p'sak* as hard and cold biological facts or *halachic* principles.

Whether ones deems the marriage rocky or smooth, there can be no denying that the interaction and fusion of Torah and science has led to a healthy breed of offspring of the type represented by the articles found in the pages of B.D.D.