Book Review: Joy of Inventing for Everyone by Abram Teplitsky Reviewed by Frederick L. Orthlieb, PhD, PE Williamson Professor of Civil & Mechanical Engineering, Swarthmore College John Terninko, PhD Responsible Engineering editor@triz-journal.com

Details: *"Joy of Inventing for Everyone"* by Abram Teplitsky. Publication date: 1994. Price: \$17.50 paperback, \$7.50 electronic, in PDF, Microsoft Reader, or Palm Pilot format. Available from <u>www.3mpub.com/teplitskiy</u>.

A few months ago the author introduced himself to us as follows:

My name is Abram Teplitskiy, and I came to the USA from Ukraine in 1996. I have a PhD in Applied Physics, created more than 100 patents and wrote 6 books in Russian (both in construction and inventing). At the end of 1994 I published my first book in English - "Joy of Inventing for Everyone", which mostly directed for young readers, but still is for everyone.

We later found out that the book *Joy of Inventing for Everyone* is based in part on a television series aimed at high school students. We were very glad to hear about this book, because it is aimed at the high school student audience, and there has been very little appropriate for that audience available in English. The editors invited two TRIZ practioners who are involved in developing methods for introducing TRIZ to high school and college students to be the reviewers.

Joy of Inventing for Everyone is not a TRIZ book, but it has chapters that are explicitly on TRIZ, and a general TRIZ "attitude" that pervades the book. Those who would like to become acquainted with Dr. Teplitskiy's TRIZ writings should see the May issue of the TRIZ Journal, for "Application of 40 Inventive Principles in Construction," co-authored with Roustem Kourmaev. A few eagle-eyed readers noticed the flag of Texas was flying on the May TRIZ Journal, and guessed correctly that they were our Texans. We'll have more from Teplitskiy on the construction industry's TRIZ opportunities in the July issue.

Voices of the reviewers:

John Terninko:

The book has an enjoyable style for reading except for the periodic Russian idiom/translation problems. This has been an interesting book to review because initially I did not think very highly about it but then found it useful for two select audiences:

1. Seasoned practioners looking for more examples

2. Someone looking for THE comprehensive reference list for self study in Creativity and related mind activities.

I do not believe it is a self-contained book for the beginner because few solutions are provided for the many exercises. This style is frequently used in teaching in Japan and in Russia but is uncomfortable for those accustomed to American-style education. The drawings that illustrate many of the problems are charming, but a significant number of the drawings don't accurately portray the situation described in the problem, which may add to the students' frustration. Instructors looking for good examples could, of course, provide their own pictures or select the examples with appropriate pictures.

Unfortunately there are some critical typographical errors which hinder the effectiveness of the material, such as pg 64, which because of a graphic rotation makes it impossible to get less than one out of four correct. Another example is pg 53 where the statement that the left hand is associated with the left hemisphere of the brain is plain wrong!

<u>Summary</u>: Useful for a select audience that can overlook the problems to benefit from the examples and references.

Fred Orthlieb

I found this quirky little book to be a surprisingly difficult "read". Perhaps that's because I took the author at his word (at the close of Chapter 1) that it's intended for high school and college students who have grand ideas about improving life - a fair description of the liberal arts college engineering students I've taught for the past three decades. So I found the frequent instances of odd grammar that followed - obviously that of an author whose native language is not English - initially charming but increasingly off-putting as I plowed resolutely (and repeatedly) through the first four chapters, which range widely over many well-known methods for stimulating creative and inventive thought. And I fear that my own level of resolution is unlikely to be duplicated among an audience of impatient North American adolescents strongly conditioned to music videos, infomercials and web surfing.

Dr. Teplitskiy's stated goal - collecting and presenting in one slim paperback an entertaining and useful variety of techniques that young people can use to increase the creativity, originality and value of their own inventive problem solving - is certainly admirable. And his attitude as a coach is invariably helpful and positive. But his writing style is sufficiently unconventional and insufficiently well-edited that few young people are likely to persist past Chapter 3 or 4 to discover the gist of his book. The straightforward and uncomplicated presentation in Chapter 5 of the 40 Principles of TRIZ, and their amplification in Chapter 6, are an abrupt and truly welcome relief from the seriously disjointed and consequently tedious mix presented in the earlier going. To young readers, tedium is death.

The remainder of the book is a much more readable summary of the patent and marketing processes, a closing challenge to the reader to confront unsolved problems, and

a nice collection of References. The physical volume is well formatted and competently produced, although the Reference Notes and Problem Solution chapters really ought to have been interchanged, and the scheme of those Problems and Reference citations ought to have been made better known to the reader at the outset.

Simply put, Dr. Teplitskiy's potentially engaging, low-pressure introduction to inventive problem solving and the fundamentals of TRIZ suffers terribly from inadequate editing, and ought not to be attempted while commuting or after any meal. I'm afraid that, short of radical re-editing, it cannot succeed among its target audience, the author's evident enthusiasm, experience and admirable purpose notwithstanding. Yet with careful re-editing, particularly the addition of sidebar example-solutions throughout the first four chapters and some smaller number of worked-through outright TRIZ solutions thereafter, it could well serve as a much-needed introduction to Creative Problem Solving for inquisitive readers from middle through undergraduate school.