

Altshuller Father of Innovation - the Contradiction of TRIZ

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All of us celebrate that Altshuller founded TRIZ and uncovered this marvellous process for problem solving for the world. Those of us who have now dedicated our careers to TRIZ can only wonder that the 20- year old Altshuller could see through the masses of information and detail in new inventions and patents to see the underlying pattern and theory of invention. TRIZ was Altshuller's great gift to the world.

All the powerful and great attract others to them, and both TRIZ and Altshuller have their followers--help the world, and those who just want TRIZ to help them and their careers. Almost all the TRIZ community are those who work in the spirit of Altshuller who work primarily to further the interests of TRIZ including his own vision that TRIZ should belong to everyone. There is however the unattractive prospect of those who might slightly distort TRIZ and claim ownership of the bits they've changed. Copyrighted and patented TRIZ type processes are a sad prospect.

TRIZ is public domain and belongs to us all, perhaps it needs some safe anchors in the world's better universities with some serious research and resources. Bath and Strasbourg in Europe and Wayne State and North Carolina State Universities in the US are leading the way here but we need more. We also need to be less afraid of comparing commercial and marketing success and "TRIZZING" TRIZ by learning from each other's successes.

The realities are that only a few people can afford to work without earning money. This means that everyone in the TRIZ community, both consultants and academics, have to be paid for their work, and have to sell their TRIZ work to industry and others. In today's economic climate this is tough because TRIZ is not well known or understood. At Oxford Creativity we like other TRIZ consultants have many successes and see all sorts of problems solved and TRIZ becoming embedded in the culture of many companies. We also find the initial marketing of TRIZ is hard, as what you don't know about, you distrust and some people are suspicious of yet another new technique. Many will accept that their engineers are more innovative and braver after TRIZ training but are nervous of a process that is initially dependent on TRIZ consultants with no professional TRIZ standards. There have been some excellent new books recently but the literature is somewhat confusing to the newcomer.

Life is not supposed to be easy.... The barriers to entry of TRIZ are high and learning it can be hard – but shouldn't be. So teaching it well is important. I would like to see standard basic TRIZ courses with standard basic TRIZ recognised qualifications, sold as successfully as other tools like Six Sigma. This also means having recognised standards for trainers. Can we decide what is Altshuller's gift to the world and make it accessible, sellable and useable, and as a TRIZ community control its development thoughtfully and intelligently? Can we define and protect the TRIZ Altshuller gave us and laugh loudly when another new TRIZ company announces they have found 22 new Trends of Evolution or that Smart Materials are

Principle 41 or try to claim ownership of TRIZ for X or Y or Z? It is important for us in TRIZ to map that which doesn't change. Once we have all agreed that, then we can take on innovation of TRIZ and not leave it to a disparate and disconnected group of individuals with disparate ambitions - those with TRIZ's best interests at heart and those with their own - although this may not be always be a contradiction. *(Editor's note: The TRIZ Journal's position is that people should publish new approaches to TRIZ and new research on TRIZ, so that other can use it. As in other sciences, publications which advance the state of TRIZ will be added to the body of work that is used, and those which do not help people or those where the research cannot be replicated and used will be ignored. In this way TRIZ will advance along its own series of "S-curves" as do other developments of human knowledge and technology.)*

When I first learned TRIZ from many including Ellen Domb I was astonished at its depth and rigour. Most corporate training is to teach some simple techniques to help people in their work. TRIZ is much much more than that. More serious training is often in problem solving techniques (Well, they are nearly all problem analysis tools), which are often reworking of long established and proven tools complicated up (and priced up) to create a business for those selling the techniques. What is best for TRIZ?

I expect many of you received the humorous e-mail below (or one like it). I think that Altshuller taught it like number one, which is how most of us try to do it, but we have those who teach it like number three, and TRIZ for management often resembles number five, and I wouldn't dare comment on those who make TRIZ like number six.

1. Teaching Maths in 1950:

*A logger sells a truckload of lumber for \$100.
His cost of production is 4/5 of the price.
What is his profit?*

2. Teaching Maths in 1960:

*A logger sells a truckload of lumber for \$100.
His cost of production is 4/5 of the price, or \$80.
What is his profit?*

3. Teaching Maths in 1970:

*A logger exchanges a set "L" of lumber for a set "M" of money.
The cardinality of set "M" is 100. Each element is worth one dollar.
Make 100 dots representing the elements of the set "M."
The set "C", the cost of production contains 20 fewer points than set "M." Represent the set "C" as a subset of set "M" and answer the following question:
What is the cardinality of the set "P" of profits?*

4. Teaching Maths in 1980:

*A logger sells a truckload of lumber for \$100.
His cost of production is \$80 and his profit is \$20.
Your assignment: Underline the number 20.*

5. Teaching Maths in 1990:

By cutting down beautiful forest trees, the logger makes \$20. What do you think of this way of making a living? Topic for class participation after answering the question: How did the forest birds and squirrels feel as the logger cut down the trees? There are no wrong answers.

6. Teaching Maths in 2000:

A logger sells a truckload of lumber for \$100.

His cost of production is \$120.

How does Arthur Andersen determine that his profit margin is \$60?

How we teach TRIZ is linked to the development of TRIZ. How can we honour Altshuller by continuing his work? TRIZ is for innovation so how can we innovate TRIZ without damaging Altshuller's original work? Those who are now trying are both very clever and less clever, who chooses between them? TRIZ, or that their work is the new S-Curve of TRIZ? Does it matter?

This brought me to the contradiction of creating a new tradition, which then can't be changed because it is a tradition. I was pondering this last week when a sermon on Abraham at Christ Church Cathedral in Oxford by the famous theologian Canon Oliver O'Donovan seemed to give me some answers and new lines of thought. As TRIZ is based on analogous thinking, the analogy of founding religions does not seem inappropriate. This was the theme of the sermon.

Abraham Father of us all... Father of a race, father of a family of religions, father of many nations was the founder of it all. What is a founder? Someone who starts a tradition that extends over many generations, whose followers are part of the practice that is carried on. The founder is one to whom the tradition must be faithful. The contradiction is that the one to whom the tradition is faithful is himself faithful to no tradition. He is the beginning everyone else is the continuation. The founder has no duty to look back to check his authenticity against the standard he received. Abraham the Father was most unlike his children. Abraham abandoned his home and family for new lands, he was a wanderer, a polygamist and prepared to do human sacrifice on his own son. Very different to the tradition he founded- I am paraphrasing a great theologian here .. not trying to shock.

Canon O'Donovan then summed this up. "Though a tradition must be faithful to its founder, between the tradition and the founder there is opposition. The founder is everything his successors are not. He begins from nothing, makes all mistakes, takes risks, and leaves behind something that wasn't there before. They inherit, learn his lessons, avoid his mistakes, and leave behind something that is still strong. They are not faithful to the founder by beginning again where he began; we are Abraham's children by going on where he left off. Our duty to Abraham is not to imitate him but of moral continuity. Religious founders are of course different to other founders, Abraham received a call: and without the call he would not have been a believer but a booby, not a founder but a fathead."

So how do we honour Altshuller and continue his tradition? Certainly not by beginning again where he began and claiming there are 30 (or 11, or 15, or...) not 8 trends of evolution. And probably not by publishing articles (Ref.1) moaning that TRIZ is too hard, like the one recently which made several potential customers stop and wonder if it was that hard and unsuccessful, should they even try? That

author is to Oxford Creativity what both Alla Zusman and Ellen Domb have commented on in public, that your pupils become your competition. I know he has had great success with TRIZ so please let's hear about successes, and intelligent debate about implementation challenges- but remembering we won't win them all we should still learn from each other's success.

How do we both use Altshuller's work as our foundations and innovate TRIZ without distorting his views and work? Can we agree a foundation of TRIZ with basic courses that work? Can we agree a standard for courses and teaching? One major company recently told me they had tried TRIZ but what they had used was a 'creativity guru' with a smattering of TRIZ. They needed persuading there was more to TRIZ than the contradiction matrix.

The excellent Altshuller Institute and ETRIA are both in place to further TRIZ work that is their approach to TRIZ consultants who invest years of their lives to making TRIZ work in companies? Can we stop poncing about on academic issues and simply agree between us how to get recognised professional standards in the implementation of TRIZ to the engineers and scientists working in the industries of the world? That's where TRIZ is going to help the world quickly and effectively.

References:

1. Brian Campbell. "If TRIZ is such a good idea, why isn't everyone using it?" April 2002 TRIZ Journal. A series of letters and comments on this article appeared in the April, May, and June 2002 issues.