

A letter to sceptics

Personal thoughts of why using TRIZ is good and even necessary

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Sometimes successful methods and methodologies are good and useful because they are pretty obvious. The same with TRIZ: Sometimes the TRIZ-suggestions (aka. Principles, Standard-Solutions, Laws/Lines/Patterns of Evolution, ways to increase Ideality, Ideality itself...) are so obvious that they seem to fall nothing short of being platitudes. Maybe they would be if they were all present at all times inside ones mind, and if all of them were checked unconsciously when faced with difficult problems. (am I describing the "Ideal Methodology" here? Oh well, TRIZ again!)

But we all know that this is not the case, and even experienced TRIZ-experts might want to look at the table of standard solutions or flip through the inventive principles from time to time.

Let's e.g. look at the "above-all" evolutionary law or one of the premises of TRIZ:
All technical systems evolve towards increased ideality.

Take a minute and repeat this sentence a few times. Maybe after two recitations you might want to shout "Of course they do!!". Technical systems DO evolve towards increased ideality. Sooner or later. Maybe with distractions and misleadings inbetween. But during the evolutionary phases and stages technical systems will lose their shortcomings, they will become more efficient, they might get more useful attributes, have less harmful side-effects and their primary function is carried out more efficiently. This might seem to be obvious, but still developments are done that don't take this premise into account, and products could still be developed more efficiently if the evolution towards increased ideality was thought of more thoroughly.

So what is the point? One of my course participants listened to the tools and methods that TRIZ offers and stated at the end of the day: "Why do we need TRIZ? All the things I heard are obvious, I think of them while working on a problem without even knowing TRIZ." Lucky him.

If we think of all the tools and methods (not only within TRIZ, but in general) and that are aimed at making things work better, more efficient, with better quality and less defects, they all have one thing in common: If you get to know them, they seem to be pretty obvious, besides making lots of sense! Of course it is a good idea to concentrate on failures with the greatest impact on costs (name it Pareto-Analysis), of course it is useful to make a list of all possible failures, causes and consequences and assess them (call it FMEA) and of course it is great to have guidelines and means to deal with an unwanted or disatisfactory situation and work systematically towards an improvement (call it six sigma). Please forgive me the simplistic approach. The reason why those "tools" provide great advantages is that they provide guidelines for doing the obvious. They remind us not to forget important steps or miss some crucial detail on our way of making things better. The same with TRIZ. Pretty fast I realized that TRIZ is not so much of getting the BIG BANG of an end-all-problems-solution, it is merely a way to think of the best ways to formulate problems and achieve a goal or remove obstacles in an elegant way. We are less likely to forget or oversee possibilities, and therefore it is so important to have TRIZ available: Being able to feel more self-confident by

creating an exhaustive and effective set of options, some of which we might not have thought of or even known before!

This is of course the totally impartial approach that stands above all market demands, business strategies and aims to increase turnover, profit and shareholder value. That's why TRIZ is sometimes so "strange" business-wise. Or to put it another way: That's why business-success is sometimes so strange TRIZ-wise. Why does the Tamagotchi not fit into the TRIZ-picture (of course you can make it fit, if you want to)? Where did the cellphone-ringtones come from? Why does one even need a cellphone screensaver? TRIZ does not itself guarantee a quick and steep market success. So there is a lot of interest in bringing TRIZ in sync with the business-requirements mentioned above. And we all have seen the success that is possible with improved innovation-capability, better usage of "human resources" and "brain capital" of employees when TRIZ is implemented in the development-process.

Yet, the mere existence of tools like a hammer or screwdriver themselves do not guarantee that you are able to build a perfect house from scratch. Even the use of a screwdriver has to be trained, and still it's not used to its best when you solely use it to open colour-cans. Of course you know the reason behind this analogy: Even TRIZ does not free you from doing the brainwork, you are still in charge of your ideas and solutions. But with much less insecurity and much more confidence (see above). Expectations are high in industry, and the overall behaviour reflects the TRIZ separation principle "within the parts and the whole system". Asked separately, the single human being (as a part of a bigger system) knows that changes need time, learning new "tricks/skills" (like learning TRIZ) takes time and every marathon-runner started as a baby with first steps and some stumbling. When looking at the "whole system" (the company or corporate system), TRIZ (or other methodology/methods/tools...) is sometimes expected to be the holy grail or magic wand that solves all our problems with the flick of a switch. Admitting that this would be great, it is just fantasy.

So how to slowly bring methods, methodologies and tools to their best use? Here comes the consultant with "change management", "innovation management" and several other methods to implement new things effectively with as little harmful effects as possible. Those ways of implementing new methodologies again contain obvious guidelines and quite reasonable ways and means. So, if you look at TRIZ, you should better appreciate the obvious rather than ignoring it. It will still be capable of surprising you the more and often you use it!