

Response To Freddy Pachys Letter To the Editor.

Dear Editor,

I always feel a sense of deep contradiction when faced with letters like that of Freddy Pachys. To respond or not to respond. A difficult question. Particularly so in this case I feel.

By responding, I present Mr Pachys with an amount of credibility that I feel his 'analysis' of my work does not merit. I don't think he has actually read my article, his assumptions about S-curves and Altshuller's work are based on a –mistaken in my view – belief that they are factually correct, and his comments about other 'work' on innovation timing are naïve at best and deliberately misleading at worst.

On the other hand, by not responding I fail to recognise that my words may not have been presented clearly enough in my article. I also leave Mr Pachys having the last word on the subject, which also potentially leaves a proportion of the TRIZ Journal readership with the impression that his text is the correct version of events.

It is these latter two points that have provoked me to write this letter.

So, with your permission, please allow me to address 3 points:

- 1) Mr Pachys comment on my timing algorithm
- 2) His assumptions about Altshuller's work on s-curves
- 3) His assumptions about other innovation timing methods

The opening statement of Mr Pachys' letter quotes a sentence from the abstract of my paper. In this quote I say that the innovation timing question is answered in one of three ways; now, never or 'some time in the future'. Taken at this level, I can see that some people might interpret this as a finding that is essentially meaningless. I hope, however, that once the reader enters the actual text of the article that the apparently vague 'sometime in the future' is actually the subject of a sophisticated calculation. The idea being that the algorithm will provide a reliable **quantified** indication of how far into the future an innovation should be launched.

Mr Pachys then proceeds to cite the s-curve as a 'similarly inaccurate' timing mechanism. I certainly agree here that the s-curve alone is an extremely inaccurate timing method. It is inaccurate because fundamentally the subject of discontinuous innovation is about **a jump from one s-curve to another new curve**. According to our research, this is a far more important question than 'where am I on the current s-curve'. Also according to our research, no-one has previously provided any credible information on this kind of discontinuous s-curve jump. In that sense I think that our innovation timing research is unique.

That aside, I was distressed to see yet another appearance of Altshuller's number of inventions, profitability and level of invention correlations to position on s-curve. Mr Pachys has alas fallen into the usual trap of assuming this data is universally correct. Although it may be sacrilegious to challenge the word of Altshuller, frankly our extensive research has time and again revealed the inaccuracy of some of these correlations. The profitability curve in particular is a very naïve approximation of what usually happens. This is not to 'blame' Altshuller – the curve is at least 'interesting' – but simply to point out that to realistically plot this curve requires

detailed company financial information that the outsider to a company rarely if ever will have access to. In my 'Hands-On' book I removed this correlation completely as I have seen more cases where it is wrong than when it is right. I did leave in the number of inventions correlation as this one is most likely to still be valid (although it appears to be shifting in the fast-moving ICT sector according to our latest findings), but I also presented new correlation characteristics that I believe are a far more accurate means of establishing position on s-curve. To re-iterate, however, establishing position on s-curve is one thing, but it is quite another different thing to predict *when the next s-curve* will begin. (I have also written several articles on this subject in the Systematic Innovation e-zine if any readers want more information on this subject.)

Finally, Mr Pachys suggests that techniques like Pest, SWOT, Porter's Five Forces, 7S, etc 'answer well' the innovation timing question. I am almost at a loss to begin responding to this point. If Mr Pachys thinks that any of these is capable of predicting discontinuous innovation he is sadly mistaken. The idea that a SWOT analysis will tell me when to launch my next innovation is frankly preposterous, and shows either a complete lack of understanding of the subject or a wilful attempt to deflect attention. Going on from there, the idea that a top-down economic analysis of innovation will answer the timing question is less preposterous in theory, but equally inaccurate in practice. Mr Pachys might some day care to talk to economists and other users of these other 'methods' to hear how wildly inaccurate they are. Put simply, a top-down analysis of a fundamentally discontinuous process – a jump from one s-curve to another to repeat the big idea – will be wrong. There is no mathematics that will enable a discontinuous innovation jump to be modelled. The whole basis of our research has been to gain a bottom-up understanding of innovation dynamics. Believe me I would have been far happier to use a top-down approach – it requires less data and less hard work for a start. Alas, in this situation, it will not work. Without the bottom-up data, a top-down understanding will never happen.

I trust that you, the readers of TRIZ Journal and Mr Pachys will take my words here in the spirit in which they are intended. Our aim is to create meaningful tools to do meaningful jobs. This often means challenging accepted norms and often means getting your hands dirty doing some actual research that might, unfortunately, upset a few people when the revealed answers run counter to their beliefs and opinions. I try to question our data every day, and invite readers and Mr Pachys to do the same. This usually, however, means, like us, getting your hands dirty and reading past the abstract.

Yours sincerely

Darrell Mann