

The 3M Post It Notes Invention

By Ellesse

Some of you may not know who Spence Silver or Art Fry was, but if I link their names with **3M Post It Notes**, I'm sure it'll ring a bell. Yes, both of them were inventors of the widely acclaimed 3M Post It Notes.

These handy sticky notes are very useful and have made our lives in the office, school or even at home much more convenient, colourful and interesting. But personally, I find the story behind the invention to be even more flavoured.

Here's to all aspiring inventors and creators.

Geez, He failed... or Did He?

Like most inventors, 3M chemist Spence Silver liked trying and error. But he never expected that by mixing simple organic molecules in a odd proportion during an experiment in 1968, he would concoct a polymer that was exactly the opposite of what he wanted to achieve. Instead of holding on to the objects after it was applied, the polymer let go easily. In other words, it was a glue that didn't stick very well. Although he knew there must be some good use for it, never did he imagine that that accidental fluke would turn out to be such a huge commercial success today.

One of the many ideas that Silver first came up with was a bulletin board. A piece of cork board was smeared with a layer of his infamous non-stick adhesive so that documents and photographs could be stuck on it without requiring the use of thumbtacks. Even though it was later released as one of the official 3M products, sales for it was disappointing.

Nevertheless, Silver was still very much convinced that there could be a better use for his invention. Thinking that more heads were better than one, he would hold seminars in 3M sharing his discovery and appealing to the audience for alternative applications for the glue. One of those many seminar attendees was Art Fry, a fellow 3M scientist who was stumped like everyone else by Silver's request.

Singing to A Great Idea

The question that Silver popped kept revolving behind the back of Fry's mind so much so that one day, he finally had the answer! While he was singing in his church congregation's choir, the scraps of paper that he had used to bookmark the hymns the choir planned to sing for that day fluttered as he stood up to sing. Suddenly, an idea struck his mind. If he could apply some of Dr Silver's adhesive on the scraps of paper, he could easily keep them in place and not worry about damaging his hymnal when they were removed!

Fry immediately put his idea to the test. He got some adhesive from Silver and applied on paper a quarter wide and half an inches long and pasted on his hymnal. It worked perfectly until he took it off. A portion of the adhesive got stuck with the hymnal. When he applied a chemical primer to his modified invention and retest it, it stuck better to them than any other surface.

To help him test the viability of his newly modified products, he gave samples of the non stick adhesive pads to colleagues at 3M. But when he visited them again few weeks later to verify if they needed more of it, he was disappointed to find that they were recycling the adhesive papers by shifting them around. The adhesive pads were not as consumable as he thought.

But he was wrong. One day, Fry thought of another use for his non stick adhesive papers. He stripped off a piece, pasted it on a report of which he had some questions about and scribbled some notes on it for a colleague. His colleague lifted the sticky paper, pasted it on another report and handed it back to Fry. When both men discussed the details of their exchange, they realised what they had just gone through was a manifestation of a new form of communication and information organization!

Obstacles Aboard

At the same time, Fry & Silver were facing a few obstacles. The first barrier came from the technical team, who explained that the company did not have the necessary equipment required to coat pieces of paper with the non stick adhesive. They were skeptical and expressed difficulty in building the equipment due to the supposed cost and complication of the technology involved.

Fry was elated when he heard that. The more difficult the process was, the less easy it was for anyone else to copy! Given 3M's capacity, it would be a strategic move for them to venture into that as it meant limiting smaller operations from sharing a portion of the market.

To demonstrate to the technical team that it might not be as difficult as it seemed, Fry built a 3M Post It prototype machine in his basement and it turned out to be so huge that he had to remove the basement door, its door frame and a portion of the garden wall outside the basement before he could move it back to his 3M lab. After some finetuning by the technical team, the production process was slowly perfected.

The next barrier came from the marketing department, which saw no business potential in the product. Undeterred, both Fry & Silver were convinced that the product would sell itself if only people knew how to use it effectively.

For a start, they distributed free copies of the adhesive pads (and taught them how to use it) to the company's senior executives and other colleagues in 3M, who loved the product. And when they called to ask for more supplies, their calls were routed to the marketing department. Needless to say, they were impressed.

The last barrier came from 3M's customers. Initial trials with 4 test markets proved to be a failure as customers could not see the benefit of paying extra for a small colourful notepad. A redirected marketing strategy saw 3M sales representatives making house calls to distribute free pads and perform free demos in banks and malls, which eventually ingrained the concept of the product into the consumers' minds. Most of them became converts.

Official Launch

In April 6, 1980, the Post-It notepad was finally launched. As expected, they became a phenomenal success and gradually morphed into many other product forms such as bookmarks, file folder tabs, phone message pads, glue sticks, tape flags etc.

Most importantly, the success of that seemingly innocuous mistake has helped to cultivate a creative environment at 3M where scientists are encouraged to spend 15% of their time brainstorming and working on new concepts and ideas, even if they may not present immediate commercial benefits.

What Did I Learn From This Story?

That a little mistake can still blossom into a great wonder. Here are my thoughts :

(1) Do What You Love To Do

As I continue to write and evaluate the different inspirational stories, I can't help but notice a strong similarity. All those great people adored what they did. I mean, what else could make these 2 men (i.e. Silvers and Fry) stay cooped in a laboratory for hours trying different ratios of chemical proportions to come up with new substances?

Well, you can say it was because they were paid to do so, but if they didn't have a genuine passion for what they were doing, do you think they would be able to produce phenomenally great work? Personally, I doubt so.

In the course of my career as an implementation consultant, I've come across many situations where staff who didn't like what they were doing generally showed lesser initiative, motivation and commitment in their jobs versus those who did. They were in that company, doing that piece of work because it paid the bills, not because it granted them personal gratification. And it showed. Whenever I asked them to come back during the weekends to finish up the data entry, they would grunt and complain. And interestingly, they were usually the ones who came in late for my trainings.

As what Steve Jobs said in his speech at Stanford University "Your work is going to fill up a great part of your life, and the only way to be truly satisfied is to do what you believe is great work. And the only way to do great work is to love what you do". Are you doing what you love to do?

(2) Distinguishing The Form From The Factor

What impressed me was Silver's strong conviction in his invention even though it was "proven" to be a flop in one disappointing product. He was particularly careful in distinguishing that it was the form (through a bulletin board) for which his adhesive was presented that was not suitable and not the factor (i.e. glue) itself, and definitely not his invention capability.

A lot of people I know tend to associate their outcomes personally (which in this case is the form) and sometimes get so badly affected that their self esteem and confidence (the factors) plummet. What they may be missing out is, once their factors get deflated, it may take more work to rebuild them than to rework on the form.

Take the example of someone who's afraid of losing his income once he quit his job. The job is just a form from which the person can earn a stream of revenue. Quitting the job is removing the form. If his factor, in this case, wealth consciousness is still fundamentally strong, he can easily acquire a new form such as getting a better paid job or starting his own business to improve on his financial wellbeing as a whole. However, if his factor is weak, he wouldn't be ready to accept an opportunity to increase his income even if it was presented to him.

(3) Power Of A MasterMind Group

In this story, you can see that it's evidently displayed again. Through the network in 3M, Silver appealed to his fellow scientists for new ideas to market his discovery, which eventually resulted in Fry coming up with a fabulous idea, improving on his predecessor's invention and building a prototype machine for mass producing the notepads.

In turn, the technical department fine-tuned the machine to perfect the production process, allowing the marketing department to trial test it into various markets and finally conduct an official launch. Now, could you imagine if Silver or Fry were to do it by themselves?

If you recall, Fry was extremely thrilled to know that there was no existing equipment able to handle the production and that only a large organization like the 3M company could possess all the necessary networks, resources and talent to drive that project. Frankly speaking, I do agree with him and believe that it's the same kind of competitive advantage one can get with a mastermind group.

Remember, if you're able to form your own group of a certain depth and capacity, you too, can kickstart a great idea into reality. Hmm... perhaps another 3M Post It miracle!

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