Intellectual Property…Right…

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Dr Spiros Kitsinelis* gained his PhD in physical chemistry from the University of Sheffield in England and since then he has been a researcher in England (university of Sheffield), Japan (Ehime University), the Netherlands, Greece (National Technical University of Athens) and most recently in France (Paul Sabatier University of Toulouse). In 4 out of those 5 countries he was appointed as a post doc.

Like most post doc researchers his results have been the heart of patent discussions numerous times in both academic and industrial posts. This article which is a personal account discusses the issues related to his patent application experiences.

From the very beginning of the scientific enterprise, scientists have been dog fighting for credit, recognition and securing a place in the pantheon of great minds. I am not sure if I can call this just vanity. Having scientific theories named after you and making sure your name is a celebrated one for centuries after your death is not just about human ego. A celebrated and recognised name means that you can secure positions, money, influence and all the means for achieving all your purposes in THIS life, in a much easier way than being an unknown doing science and research just for the thrill of it (unless you are already a noble and rich man which has been the case so many times in history).

Read any biography of famous scientists or any book on the history of any science and you will come across characters and situations that at best remind you of great Greek dramas and at worst of mediocre Brazilian soap operas. So have things changed in the past few decades since scientists do not become anymore household names? Science has become more than ever a collective effort and scientists are so specialised that it is unlikely for a single individual to rock our everyday lives through his or her work alone. Well my short answer is NO, things haven's changed a bit. Yes, sure there are no big and bitter personal fights taking place anymore publicly and people these days disagree in a polite manner over glasses of wine in some exotic conference venue. However money and the materialistic benefits of science still remain top priority for all researchers. Let us name a few of these benefits: Academic or industry positions which can be so hard to find especially in countries like Greece with no significant research and development activity, funds to continue research (YOUR research as it is difficult in a specialised and competitive world to just switch topics) and finally the dream of many scientists and researchers which is the setting up of a company that could really make you big money.

Well the first two could be realised if you are an industrious researcher and keep the publications appearing at a regular basis. The publications will not make you rich but they help a lot if you are on a job hunt or applying for funding.

But when business plans start appearing on someone's mind and the dream of founding a technology company is upgraded and renamed ambition then we run into another popular word of our times: capital. And what is the capital of today's world?

Knowledge and ideas. The same way you would try to protect your money while setting up a company, you would like to protect your research results and ideas. Intellectual property protection is not something new after all and there are offices all over the world that could offer a helping hand. A researcher for example could ask for the help of the university's services, contact a patent agent, apply through the national patent offices and eventually get after some time and phases a patent that guarantees protection and paves the way to riches. Sounds easy? You know, for some in certain countries or institutions it might be. But it is not for everyone, not always and not everywhere.

The important part of this article begins now.

Secondary title:

Why you can never become super-rich from your ideas and patents unless you are already rich and why the existing patent system is suffocating most scientific minds.

I am not a patent agent or a business man. In fact law and economics are two subjects I know nothing about and for that reason I have come to terms with poverty from a very young age (the only times I will be quiet in a circle of friends is when these two subjects come up….any other subject and I am the loudest in the room). However I do have some experience about patents as I have applied or been granted a number of patents from different work environments. So I hope my few experiences might be useful to the reader.

Here's some situations you might find yourself into (I will try to examine all possible situations a researcher might be in while conceiving THE idea)

a) You work for an international company (or any company that is not yours)

This is the easiest of cases. When you sign your contract with the company you agree to giving all rights of any ideas and results that were born during your term there, well…to the company. At best you will receive what they call an incentive award. An incentive award is bordering the joke land and it does remind me of the ridiculous salary we were receiving while doing our military service in Greece…they paid us the astronomical amount of 8 Euros and 60 cents. No typos, really. Not convinced? Ok I'll write it again… eight Euros and sixty cents per month for each conscript.

The incentive award is not THAT ridiculous and to be honest I have no idea what they pay in most companies but here's my case from the time I worked in a huge international technology company in the Netherlands. 1500 Euros divided by the number of people that developed the invention to be filled minus tax. I received 380 Euros for an invention proposal that might end up to nothing OR make the company a few million Euros and that is a conservative estimate. Of course I don't expect companies that patent inventions by the hundreds to start giving out millions but they should have terms that guarantee the inventors extra benefits if the whole thing is a success (and it can only be a success if the

actual researcher in question does continue to pursue the matter heart and soul). For an invention idea that I had that was not even patented I spoke once with the marketing people (in charge of making estimations and giving the go - no go sign) and not only they gave the 'go' but also gave me the information that a conservative estimation points to 100 million Euros profit if it goes well. That was not even one of my big ideas. So do your job…take pride from your work…honour your contract…take pleasure out of gaining your colleagues' respect and seeing your name next to the word inventor (sounds geeky but it does impress the opposite sex) and keep up the research career in that great and safe company that guarantees you a comfortable life and a good pension but for the love of god NEVER DREAM of anything bigger than your normal pay check. Another company (here's a clue: American and one the five biggest companies in the world) offers to anyone, even not employees, through their website the amount of 5,000 dollars for ideas that eventually will be adopted by the company. But who is going to guarantee you the ''reward'' after you post your idea? For all we know they could be replying ''sorry but this is not useful or related to our activities'' but at the same time adopt aspects of it. And they have armies of lawyers to do this right.

b) You don't work for a company so there are no legal bindings. You are free as a bird and the sky is the limit.

Unless you own the sky or even a small part of it, stop dreaming again. As an individual and a private citizen the chances you have of making big money out of your intellectual capital are again small for one simple reason that has four letters: cost.

A big international company has the money to employ lawyers, patent experts and pay for protection hundreds of times per year. But unless you spare thousands of Euros and believe in your idea more than you believe in your mother's love, it will be very difficult for you.

The cost for a five year national patent in Greece for example is in fact quite small. Including a patent search and all other procedural expenses it might not even exceed 500 Euros. In Greece the government subsidises the national intellectual rights organisation and this cost is lowered to less than 300 Euros. But it is only a national patent. In order to get your invention protected in the whole of Europe the cost increases in proportion to the number of countries selected and can reach a few thousand Euros. If one opts for an international application then the time to get there increases dramatically and the cost is a few tens of thousands of Euros (for some that may want the help of a patent agency the cost is of course increased). So like I said if you have money to spare (a lot of money) and you believe in your idea that much, go ahead and most likely it will worth it as I know people that have done it and made it. If on the other hand you cannot even afford to change the tires of your car, just find another way…come on you're a scientist, you'll find another way.

If you do go ahead here's a tip drawn from my experience. Before you pay for anything ask your local / national offices to do a pre-search (this costs only 30 Euros in Greece) as it will companies have big money so they patent at will. The patents are not only great in numbers but also cleverly designed to cover as much area as possible. Finding windows is difficult and in any way you don't really want to compete with them.

The thing about patents (and this is what I find the most annoying part of this whole affair) is that you get the impression that it's less the results that count but who claimed it first. In one case I produced graph after graph of measurements of a new system but the patent agents told me that others have claimed it before me. When I asked to see their results I was told that there were none and that the most important thing is the explicit (and syntactically clever) way to claim it.

c) You don't work for a company and you don't work for yourself.

This is the third and final case I am going to discuss. As scientists you should already have guessed what's coming up. If you're not working alone or for a company, the only other place you find researchers aplenty is the academia. My opinion is that this the most promising situation as universities in general are more generous and instead of immediate and small benefits they guaranty a good percentage of the profits for inventors if something does come out of a patent. Of course it takes a rich and well organised university for something to happen which is not the case in most countries. Respectable academic institutions have the economic power to get and maintain a global patent. A university is not really a business enterprise but being able to protect ideas and research results and knowing you own a good part of it is a good start. If the university is serious then it supports the researcher in question not only during the patent filing process (covering costs and providing expert advise) but will also support the academic into setting up a spin off company (both parties will benefit) or come to a nice agreement with a big company that wants to buy the rights (again everyone is a winner). What could go wrong in this case? Well a number of things could go wrong and I will list a few based on personal experience. If years pass after patent granting without putting the patent into good use, the university might decide to stop maintaining it and save the cost (as was my case in Britain). The university might not simply have the finances to support it at all. The university does not have truly qualified personnel or is not organised well enough to support at any level (Greek Universities definitely fall into this category). In this last case researchers usually go ahead with patenting by themselves excluding the university from any application putting themselves down as the inventors and beneficiaries but then we run into the problem outlined in case b). This last practice is most likely illegal in most countries but appears to be common practice at least in Greece.

What is my conclusion after all that? Well if you do have ideas and you are ambitious enough to build a company out of them then keep them to your self for as long as possible and search for funding. Venture capitalists and European programs for small enterprises can be found. Another option is contact you local or national SME (small and medium enterprises) body or

the ministry of development (many ministries have useful links and info) in order to get information about funding sources. If you do secure the money then free your self of any legal bounds and go ahead alone.

An important aspect is also how to write and present a patent (millions of tricks and catches) and here the only way you can be safe is with a patent agent.

However making it is extremely difficult and rare (if you are employed by MIT you'll disagree but for most scientists on this planet it is) and my personal belief is that the existing patent system is problematic in the sense that it inhibits innovation and the prosperity of most people. When designed in the 19th century it probably helped great minds, inventors and entrepreneurs to move us forward by giving them enough incentives but today's world is different. We now live in a world dominated by huge organisations and the system is ensuring the ongoing prosperity of these organisations and not individuals. If we want our societies to become knowledge societies and people to prosper through innovation then the whole system needs redesigning so that it will support the bright independed minds and not the established giants. Perhaps a solution to this problem would be the founding of government agencies that would support financially the patent applications of private citizens. The inventor would then have to share the IPR with a government / public organisation that would benefit from the invention.

Europe is struggling to get the new generations back in sciences and the only way to do this is by providing real and practical incentives. Protecting the giants does not point to this direction.

Also read the following interesting article

Patents and the Regress of Useful Arts, Andrew W. Torrance (University of Kansas - School of Law) and Bill Tomlinson (University of California, Irvine)
Columbia Science and Technology Law Review, Vol. 10, 2009

Hellenic Industrial Property Organisation
http://www.obi.gr/obi/Default.aspx?tabid=71&

European Patent Office
http://www.epo.org/