

Solving Your Future Equation

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Adapted from her speech at the Notre Dame College of Engineering's Industry Day banquet, 1996.

So you've decided to study engineering and now you're wondering about finding a job. You possess a certain sense of excitement as you embark on this journey. You feel a great sense of joy that you have made it this far and that the end is in sight. You anticipate the new futures that await you and all of the new experiences you'll have. You – and your parents – are heartened at the prospect of a consistent paycheck.

But perhaps you also have a lot of anxiety. You might wonder whether or not you'll be able to find a job that will be fulfilling or even a job at all. You might question your decision to become an engineer in the first place and don't know what you're going to do with your major. You might wonder where you'll be living and whether or not you'll like it there. You might have concerns about whether you'll be able to meet your student loan payments and other financial obligations.

It's very easy to feel overwhelmed, isn't it?

As with any turning point or time of great change, there are many conflicting emotions.

When I was in your position I felt pretty much like you do now. While I'd like to think that I took a horribly logical approach to finding a job, I realize that, in retrospect, my approach may not have been so logical. The passing of time, however, has given me the ability to look at the situation you are in now to try and help you figure out how you can apply logic to the feelings that you're currently experiencing. After all, aren't engineers logical people?

Well, as engineers, we have all been schooled on how to solve problems:

- First, we outline what the problem is and break it down into its component parts
- Next, we figure out what our knowns are and we write them down
- Then, we determine where we don't have information and we try to fill the holes
- Finally we plug and chug with all of the information at hand to get a solution.

Does this sound vaguely familiar?

Now what would happen if we took the problem solving approach I just outlined to help you sort through the myriad of emotions you experience as you search for your job and plan your career? Let's see where we'd end up.

First, you must clearly state the problem you are trying to solve. Most of you would probably say that your problem is trying to find a job. Using all of my worldly wisdom, however, I'd say that your problem is actually trying to figure out what you should do with your future.

Why did I rephrase the question that way? What future are we discussing? Is it your employment future? Is it your future on a more personal level? If I were you, I would not limit the problem statement to your

employment future alone. Work is only a part of the equation you are trying to solve. If you focus in on solving the employment piece alone, you'll ultimately regret the fact that you neglected your personal life in the process. A solution that helps you to balance your employment and personal needs will help you retain your perspective, energy and zest for life on an on-going basis.

But which comes first, the chicken or the egg? Should you start with a focus on your employment or your personal life? For each of you the answer to that question will be different. While you are each trying to solve the problem of what to do with your future, you each come at the problem from different starting points with different needs.

So what do you do? You list out the givens, that is, what you want and what you don't want in your future and you start solving your problem from there.

When I was in your shoes I could only define one thing. I knew that I did not want to be an "engineer" in the hard core sense of the word. I did not want to sit in a lab solving problems all day on a calculator. That sounds very negative, doesn't it?

Well, sometimes all you know is what you don't want to do. You can use that "negative" information as a starting point from which to figure out what you do want to do.

When I first came to Notre Dame I wanted to be a chemical engineer. I was good in math & science, so engineering seemed like a logical choice. I enjoyed chemistry, so chemical engineering made sense.

I took chem lab my first semester freshman year. One week I created matter, the next I destroyed it. I figured out that, over the course of the semester, it probably all evened out, but I quickly came to realize that my future was not in chemical engineering. I then tried to figure out which other discipline of engineering might interest me.

After taking my first year of physics, I realized that I didn't much care for the subject. That ruled out things like aerospace, mechanical and civil engineering. Physics is kind of important in those areas. That left me with electrical engineering.

At that time there were 2 different electrical engineering options at Notre Dame - the power & circuits side of things (now in the Department of Electrical Engineering) or the computer side of things (now in the Department of Computer Science & Engineering). I eventually discovered that the computer aspects of engineering interested me. I majored in electrical engineering with the computer option (today's CPEG degree). Today, I'm still doing things that rely on both my engineering and computer background.

In that process of deciding upon my major, I had some positive pieces of information - I was good in math and science and I liked computers. I also had some "negative" pieces of information - I didn't like chem lab and physics. Both the positive and the negative information helped me arrive at the correct decision for me, even though I seemed guided more by the negative information at certain points.

What are your knowns? List out your likes and dislikes & go from there.

Once you have listed out the knowns, you must list out what you don't know. If we take a look at this from the employment side of things first, the unknowns can range anywhere from "I don't know what type of company does what I want to do" to "I'm not sure what types of positions I should even be looking at." So how do you start filling in the unknowns? There are many ways.

First, contact representatives from a variety of companies to help fill in some of the blanks. Companies that come to Notre Dame to recruit engineers look for qualified individuals who will be able to blend into their corporate cultures, while adding their unique talents and expertise. They are seeking you as much as you are seeking them. Talk to them. Ask questions. Use any opportunity you can – going to Industry Day activities, listening to speakers who come to campus, participating in conferences and meetings of professional societies in your discipline -- to get some information to fill in some of the blanks.

Next, take advantage of the resources available to you in Notre Dame's Career Center and on the Internet. The Career Center has a lot of materials provided by the companies to help you do your research. Most companies also have Internet sites through which you can learn a great deal about a company in real-time. Companies post all sorts of things on their web sites regarding their corporate strategies, interests, etc. The key to successful job hunting lies in doing your research.

Third, talk to your family or those friends of yours who have graduated in recent years. Find out what they're doing & where they're doing it. Find out if they're happy in their current positions and why.

Fourth, talk to the professors who know you well. They may see an ability in you that you might not see in yourself, and they may have some good suggestions for you. Use them as a sounding board. One of the things that differentiates Notre Dame from a lot of other schools is the degree of contact you have with your professors.

Fifth, try to figure out what sorts of opportunities will allow you to learn on an on-going basis. Through continuous and lifelong learning, whether within or outside the context of work, you have the opportunity to grow and to learn. You were accepted at Notre Dame because you had a great capacity to learn. After you leave, that capacity will still be there. Tap into that capacity to reveal the unlimited possibilities that await you.

The learning I have done has helped me to change positions within my company four times in eight years. One of those changes took me on adventure to Europe for a year and a half where I learned about a new culture, traveled around Europe and met my fiancée. Talk about learning changing your life!

I should point out one important thing about my suggestions for planning your future: Nowhere does that list include the idea that you should sit back and wait for the jobs to come to you. While that would be a much easier way of handling this, it's unfortunately not how the job hunt works. It is going to take a lot of effort and energy on your part but, after all, aren't you trying to solve your future equation?

On the personal side, determine what things matter to you the most. Is it proximity to your family or friends, or is it your interest in outside activities?

Take time to reflect. Notre Dame provides you with a wonderful environment in which to explore the spiritual aspects of your life. Don't discount your spiritual side when solving your future equation. Talk to the lady on the Dome. Spend some quiet time at the Grotto.

These are all important things to consider.

Now where are we in the process? Have we reached the plug and chug part yet?

Well, after you have gathered all of the information you can, you may find that you have some gaps – those pesky unknowns -- that you haven't been able to fill in. What do you do then?

Most of you aren't going to be able complete the entire picture before making a decision about what to do with your future at this point in time. You can, however, analyze the picture before you to help make an informed decision.

How does the picture look? Does it seem fuzzy like an impressionist painting, or startlingly clear? Does the composition lack something? Look at the picture from many different angles. Turn it upside down. Take a step back from the details. Sometimes it's a matter of changing your perspective or vantage point. Even an impressionist painting with all of its little dots becomes clear when you're standing across the room.

At this point, too, faith and intuition need to kick in to fill in the gaps. Listen to your head, but be mindful of your heart. There isn't a back of the book to turn to in life to help reverse engineer the answer.

Fortunately or unfortunately, you will eventually have to decide what you're going to do after graduation. Many of you will make the correct decision and be happy in your situation for many years to come. A few of you, however, will feel as though you haven't made the best decision. Take heart - few things in life are fatal. While there will be opportunities to make changes in the future, the time you invest now will hopefully set you in the right direction.

I wish you well as you work to solve your future equation.

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