

*Talk given to graduating Engineering  
Class of University of Miami March 1957*

Good evening graduate, girlfriends, wives and companions. After dinner is a difficult time for anyone to speak on a subject which requires even a trace of seriousness. Therefore, although the subject is of a monumental nature, let's approach tonight's topic from a little different avenue. The title is, "Decisions, 1957", and its content is going to be exactly what the title states. However, instead of looking at the negative characteristics of the many decisions of the many decisions that have to be made, let us, in the next few minutes, consider some of the positive aspects.

There is an axiom which many of you will soon learn, if you haven't already applied it--In order to make changes you have to have something down on paper--or, stated more simply, any project must start with a line drawn by you. Therefore, let us grab these decisions which must be made and shake them a bit to see if something helpful can be squeezed out of them.

Since generalities and evasive statements are always a sure way to the ruin of a speaker, I have decided tonight to speak of these decisions in subjective terms. Thus, at the risk of being called self-centered, this will give you an opportunity to disagree, argue ~~re~~ berate, or otherwise ignore the comments as being peculiarly personal to the speaker. Since there is nothing like disagreement after a good dinner to keep everyone awake, this is precisely what I hope you will do, and is precisely why I am speaking in the subjective.

The four areas of decision you are going to be faced with are concerned with jobs, future education, professional affiliation and, for those of you students who are male, and I assume the majority are--girls. Let's take them one by one.

By now the recruiting on the campus has reached proportions resembling

those to be found on a Hollywood stage setting. Do not be confused nor fooled by the graciousness, magnitude or glitter of any offer you may be made. Look around the recruiter to see what the firm that stands behind him is like. To do this, talk to engineers in practice now, write to members of your family or friends who live in the city where that firm is established, check into the firm's financial standing, determine, determine how it has progressed in the stock market in the last few years. Essentially, find out if you want to tie your wagon to this particular star. In the first three to six years out of school it is fantastically important to you that you obtain not remuneration for services given, but experience in doing all of those things which you some day hope to direct. Becoming subjective immediately, I have found that what respect and leadership I gain and furnish those people with whom I work has been almost completely the result of experience gained in those first few years out of school. The ability to draft, the ability to check shop drawings, the ability to talk to suppliers and willingness to accept any job, no matter how small or how large, and gain from it everything there is to be gained, has been a constant source of inspirational material to those people who I have had to direct. You must be able to do in reasonably good fashion any activity which you ever hope to be responsible for at an executive level. I am sorry I can't develop this more, but perhaps I have already indicated a direction from which you can provide interpretation and analysis.

Our next question is, what about future education? My future education was limited to the obtaining of a master's degree some three years after I completed my Bachelor's work. During those three years I learned many things, the most important of which was the fact that

I really did not like mechanical engineering. Something else I learned was that continuing education is a taken-for-granted matter in this day and age. Those two factors could never have been realized in subjective fashion unless that three year gap between undergrad and grad work had been present. Except in unusual circumstances, and I feel they should be very unusual, it would be my unqualified recommendation that your continuing formal education be interspersed with the application of that knowledge which you have already absorbed. Formal education is a tool and those tools which you have at your disposal now should be applied to your job analytically and objectively so that you can readily see what additional tools in the way of further formal education are needed by you.

Let's consider professional affiliation briefly. By now, most of you have had ~~elbow contact~~ with what we term professional technical groups. However, your contact with purely professional groups is yet to come. The approach to professional ethics and morals is one which will, to a large extent, determine whether we will improve utilization of engineering manpower, economic status and community standing. Therefore, I urge upon you that you either be formally affiliated or informally associated, to become engaged in a study of your profession. I commend to your attention the publication by the late William E. Wickendon, entitled "A Professional Guide for Junior Engineers". This publication is perhaps the most significant ever written on the subject of our profession. Every engineer will be a better engineer when he has completed even a cursory reading of this document.

The fourth of our decision areas I entitle "girls". I only wish that I had more time this evening to discuss this particular subject,

since it appears that there are many of the fair sex who have an interest already in their particular male friend to attend such a function as this. This group is more mature than was the college group in the days prior to World War 2. Therefore, many of you are married, some with two, three or four children. However, many of you are single--some with intentions to remedy that situation, some with intentions to prolong it. To the women I say this--become interested in your man's activities. Associate yourself with his day to day work. If he is worrying about a problem in engineering, professional ethics, relationship with other engineers, anything which is affiliated with him and his vocation, try to understand and help him solve it. You do this by finding out what he does, what his drafting room or office looks like, what his associates are like, why he doesn't want to talk when he comes home nights. Find out these things about him; be sympathetic, be encouraging, don't nag, and you will find that all of the things which you hoped for when you married this peculiar introvert-ish individual will become yours. In fact, you might even turn him into an extrovert. My wife has <sup>been</sup> / more responsible for any advances, either professional, technical or ethical, than have been my privilege to achieve than any other person I can think of, including myself. This should be the goal of every woman who marries an engineer, or, for that matter of fact, any professional person.

As I finish this talk I realize how shallow it really is, since each of the four areas I have pointed out are capable of a full evenings or even a full week's discussion. If I have done nothing more, however, than to point out to you the important areas in which you must make decisions this year, I feel I have made something. I only hope that what I feel I have gained you also have benefited from. Thank you.