

ADDRESS BY THE DEPUTY PRIME MINISTER TO THE  
ENGINEERING SOCIETY, UNIVERSITY OF MALAYA,  
KUALA LUMPUR ON 28TH AUGUST, 1965

Mr. President, Ladies and Gentlemen,

I am very happy and honoured to be here with you tonight. This has for me, as a layman, been a very "technical day".

Earlier today I declared open the new Headquarters Office of the Technical Association of Malaya and had to be brave enough to stand up and face a great number of Engineers; and here this evening as a non-technical layman, I have got to summon up courage again and face all of you budding Engineers of the future.

However, I like your profession and the thing I particularly like about Engineers is that, as compared to members of other professions, such as my own profession of law, very few Engineers have seem to be misled into dissipating their University degress by wasting their time standing for politics!

I wish the same could be said of my fellow politicians who unqualified as they are in your science and art, nevertheless, are always "engineering" something or other and in most cases "engineering" the wrong thing!

Perhaps you could ask the Institute of Engineers to add a special clause to the Draft Engineers Bill to prevent Politicians from "engineering".

I should like to say how pleased I and my Cabinet colleagues are with the success of this new Faculty of Engineering and with the speed with which it became established and also established a name for itself and the reputation of producing Engineers of quality.

I should like to congratulate Professor Chin Fung Kee <sup>1</sup> and Members of the Faculty of their great success.

Our country needs an almost unlimited number of Engineers, young Malaysians, dedicated to the application of modern technical skills, and as Professor Chin Fung Kee pointed out in his address last year, we also need an increasing number of technicians and craftsmen.

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<sup>1</sup>Dean and Profesor of Engineering Faculty.

I am interested to note his figures, that it is reckoned for developing countries like ours that there should be about 5 technicians and 25 craftsmen to every Engineer.

I understand that the Technical Division of the Ministry of Education are tackling this problem of the production of human technical talents so that our future development will not be hampered by lack of technical skills.

If these trained technicians and craftsmen are not produced quickly you young Engineers will be like an Army of Generals with no troops to command! However, my Government is giving full attention to the matter.

When eventually, you members of this Society leave the University and start practising your profession, you will find plenty of scope and opportunity in playing your part in giving your contribution to the development of Malaysia.

As you know we are coming to the end of our present National Development Plan and next year we will launch the First Malaysian Development Plan.

This is an ambitious Plan designed to fulfil the needs and progress of our country.

It is a Plan forged like a knife with a double blade, cutting on the one hand the path of progress in the agricultural sector of our economy in the diversification of crops and in the opening up of new land in the rural areas.

On the other hand, the other blade is designed to carve out a place for Malaysia, a rightful place, so that we may eventually play our part and reap the benefit of our share of industrialization in the Free World.

So therefore there will be ample opportunities for many years to come for young engineers after graduation to choose a career either in Government where you will help in the great task of implementing our National Development Programme.

If on the other hand you prefer to join the private sector in industry you will find an equally satisfying career lies ahead of you.

I am glad to know that his Faculty of Engineering has been so oriented in the education and training of young Engineers, (and also

oriented the conduct of your research), to meet the special needs of our country, Malaysia.

I actually stressed this very same point in a different context earlier today when I said that we must not be too concerned with international standards designed for the needs of countries placed in different circumstances and different climatic conditions.

And I hope that this process of orientation in training of graduates will be kept constantly under review so that the needs of our country will always be put, first and foremost and eliminate the tendency of acquiring academic knowledge purely for the sake of being academic.

The context of which I explained this was in the context of our development programme vis-a-vis our National Defence.

We are facing external aggression from without, and at times, internal subversion from within.

Therefore, in order to defend our sovereignty, in order to guarantee our independence, much more money has now got to be diverted to the maintenance of our Armed Forces and Police Forces and yet, in spite of this threat, the Alliance Government are determined that the pace of development of our Nation will not slacken.

This means that in order to keep up the tempo of development we have got to get maximum value out of every single dollar, and every single cent, that is allocated for our development programme.

This means that we need the highest standard of sincere cooperation from every single Engineer, Architect, Surveyor, and other professional men to ensure that there is not one drop of financial wastage in any single project.

This may also mean professionally, to some of you, that Engineers will have to sink a little bit of their professional pride and yet not lower their standards.

Because if we are to get the maximum value for our money the development projects we are to construct in the next Development Plan must be constructed sufficiently well to be functional but they must not be built and designed so well that valuable money is wasted on fancy designs and unnecessary extras.

Your Faculty of Engineering has an excellent record of student cooperation and assistance with Government development planning

and implementation, such things as the survey and re-design of the road to Bentong Town, survey and design of the Sungei Dua Road in Pahang and the survey of the Ulu Langat-Kachang Road and the laying of pipeline for the Federation Military College.

This is the right spirit, when the University Faculty takes such sincere interest in, and applies itself to assisting our National Development.

Perhaps you young budding Engineers will also assist further by applying your engineering minds to suggesting ways and means whereby Government can standardise plans for building and cut down costs to basic utility and function-ability so that we can stretch our allocation of National Development funds to obtain the maximum benefit, for the maximum number of our people.

Also we must make the most use of local products such as local timber and other products so that we can save on foreign exchange — perhaps by having more schools, clinics, offices, etc., made from timber.

Admittedly, such standardised structures will not be as pleasing to the eye as brick and concrete buildings but in the phase of our development we do not want beauty so much as utility; we do not want luxury; we want to fulfil the necessities of our National existence as a progressive young nation — let us leave luxury to the far future!

I was very glad to hear your President saying that "you must not only think, when you leave your University, of your degree, but you must be also conscious of your responsibilities to society and that in addition to your academic studies, you should participate actively in debates, in the Students' Union, the Territorial Army, in Sports and other extra mural activities".

This is a subject which is very near my own heart! I am not here to give you a full lecture, and advice, on extra mural studies and social activities, because I am greatly restricted tonight, in the presence of my wife, but perhaps if you want a full discussion on the subject next time you might like to invite me alone, and do not ask my wife!

I know that as University students you have got to have a balance between hard work and must not let your extra mural studies interfere with your work but it is not difficult to strike the balance. It can be overdone, of course.

I remember the story of a visiting Professor to a certain University who congratulated the Vice-Chancellor and said:

"Permit me to congratulate you and your University which has in recent years become a store-house of knowledge".

The Vice-Chancellor replied:

"That is true, but I do not deserve the credit for that. It is simply that freshman bring so much knowledge in, when they arrive in the University and the graduates, when they leave, take so little knowledge out of the University, when they graduate, because they spend all their time on social activities! Therefore we have a great store of knowledge left in the University!"

However, quite seriously, recent exercises for recruitment of graduates both to Government service and to the private sector, commercial firms, have shown that there is a tendency on the part of those seeking employment after they leave University to think that they are only judged on the quality of their degree and the standard of their academic qualifications.

I think all of you here tonight should, and must remember, that when the time comes for you to be conferred with your degree and then enter the very competitive stream of selection for employment, your potential employers do admittedly, in the first place look for a high standard of academic qualification; but also these selection boards, whether they be Government, or private, are like the story of a Buddhist Lama in Tibet who is gifted with a third eye!

The first two eyes judge professionally, academically, and the third eye sums you up as a potential personality that will fit in to the mosaic and the structure of the organization in which you are seeking employment!

And even although you have the finest academic qualifications in the World, but have no personality, no potential qualities of leadership (unless of course you are applying for a back-room job of research), you will not be given the appointment to which you think, with your academic qualifications alone, are able to fill.

I do not wish to disparage the system of higher education in Universities but it has happened on occasion, and let us face facts, that the men with lesser qualifications, who used their opportunities in University to mix socially, to take part in sports, and in debates and, by so doing, has become a balanced, pleasant and positive personality; in

other words, to develop into a potential leader — quite often get better jobs than those who spent their University days buried entirely in books.

To illustrate what I mean, let me go back to Professor Ching Fung Kee's figures when he said that behind each Engineer there must be 5 technicians and 25 craftsmen to every Engineer.

You must remember that when your potential employers interviews you as a new graduate Engineer, he does not think of you remaining, for the rest of your life, as an Engineer at the bottom of the ladder of your profession, with only 5 technicians and 25 craftsmen, under your control. No! At the interview he tries to think of a mental picture of you in 10 years time, having been promoted, not with only 5 technicians and 25 craftsmen behind you but with another 25 Engineers under your control.

And if each of these 25 Engineers has 5 technicians and 25 craftsmen then you, as leader of the Engineering team, must not only have engineering qualities, but must also have qualities of leadership to be able to get the maximum amount of work, cooperation and co-ordination from

- (a) 25 Engineers
- (b) 25 multiplied by 5 technicians equals 125 technicians and
- (c) 25 multiplied by 25 craftsmen equals 625 craftsmen.

And therefore you, in 10 years time, will be a leader of a total team of 775 human beings from which you have got to obtain the maximum efficiency in your engineering project.

Your training as an Engineer gives you the ability to handle machines but looking to your future prospects, your job and technique of handling human beings, and obtaining from them the best results on your engineering project.

So therefore your President was so right when he said that Members of your Society must take part in social activities of your University so that you will be equipped, when you leave the University not only to advance yourself, in your own career, not only to advance in your own profession, but also to make a contribution towards the advancement and progress of Malaysia because Malaysia needs leaders in every sphere at every level and in every way of life.

And" finally, before I close my speech tonight I want to make a confession to you. When I realised I had to speak to Members of this

distinguished Engineering Society, the first thing I thought of was that I must find a definition of an Engineer.

My research into this subject produced a standard definition which you all know which has been repeated so often, dating back to 1828.

But you as undergraduate engineering students know this definition by heart, I then did a little more research to find another definition of an Engineer. This definition was written by some obscure person who obviously have not the benefit or the honour of being a member of your Society.

Probably, like myself he was a layman, with no technical training whatsoever. However I will still tell you what he said; how he defined an Engineer. He said: "An Engineer is a person who can construct anything for one dollar which a fool can construct for two dollars.

You may not like that definition but if you think about it, it probably has a message for you when you graduate because when the time comes for you to apply for employment either, in Government service or the private sector, and if you can better this definition and be an Engineer who can construct any given project, and instead of constructing for one dollar where a fool uses two dollars, if you can construct it at fifty cents per dollar, then not only are you welcome in Government service, not only are you welcome in private engineering firms but your promotion is guaranteed for life!