

CAREER GUIDANCE

141 Spring Lane  
Winter Park, Florida 32789  
November 19, 1974

→ ASH

Carolyn F. Phillips, P.E.  
President  
Society of Women Engineers  
45 Parkside Drive  
Suffern, New York 10901

Dear Carolyn,

Enclosed is a copy of the luncheon speech given in Cocoa Beach. I tried to write down as closely as I could remember what I had said. Also, I have written Erma Bombeck's syndicate for permission to re-print her column. The response will be forwarded to you.

What a great experience the symposium was! I look forward to being an active member of S.W.E. and supporting more such conferences in the future.

Listening to women like you, who have overcome many obstacles to reach success in engineering, was quite an inspiration.

The girls at Florida Technological University in Orlando are planning to initiate a student chapter of S.W.E. I will help in this when I am back on campus next quarter. In the meantime, would you please send me an application for membership-at-large?

Thank you for your kind words. I'll see you again before long.

Sincerely,



Sigrid King

Encl.

RECEIVED  
FEB 13 1975  
A. J. HARNES

Society of Women Engineers National Records, Box 90, Folder 9, Walter P. Reuther Library, Wayne State University

Luncheon Speech  
by SIGRID KING

November 9, 1974  
Cocoa Beach, Florida

FIRST ANNUAL FLORIDA STATE SYMPOSIUM  
FOR WOMEN IN ENGINEERING AND THE SCIENCES

I was honored to be asked to speak in the absence of Florida's "Outstanding Young Engineer of the Year". Since I am a sophomore at Florida Technological University, I can't say how to be a good engineer; but I can share some experiences of being an engineering student and a mother at the same time.

When someone asks me what industrial engineering is, my simple explanation is "making things go better." I discovered this was my particular field of interest in a Sunday School exercise in a class for young adult singles. We were asked to section our lives in time segments--ages under 5 years, 6 to 9, 10 to 15, 16 to 19, 20 to 24, and so on. In each segment we were to put the accomplishment that gave us the most pride and satisfaction.

In looking back over my life, I found that I derived the greatest pleasure from devising a new system, working through a knotty problem to a successful solution, or figuring out more efficient ways to do things. It stands to reason that if I have felt this particular pride consistently throughout my life, this is the vocation which will offer me the most satisfaction in the future. That's why I am studying to be an industrial engineer.

There are some definite effects on the family when Mom decides to become an engineer. I don't have the problem with others thinking

page 2.

I drive a train, but when my children tell their friends that their mother is an engineer at Walt Disney World, where I Co-op, they think I drive the monorail!

The home is a perfect proving ground for engineers. You know how the male engineer was always the kid tinkering with a chemistry set, or model airplane, or automobile engine? Well, we females do a lot of engineering experimenting right at home.

For instance, there are four children in our household. That's twenty packed lunches a week. There has to be a system for coordinating all that peanut butter!

In our home, each child has a "snack box" with his or her name on it. It is my responsibility to fill these boxes before the week starts with enough snacks--usually about 7 bags of goodies each--and to fix a big bowl of fruit. My husband makes the two kindergarten boys' sandwiches and fills their thermos' each morning; the rest is left to the children. They each choose a snack, a fruit, and a napkin.

This teaches them responsibility where they alone benefit or suffer from their efforts. It also teaches discretion and budgeting--as they decide when to take the extra snacks.

Another engineering area is in the laundry. We have a laundry room with five baskets marked "WHITE", "DARK", "IN-BETWEEN", "TOWELS", and "SHEETS". Each family member has his own container for dirty clothes, and the idea is they each learn to sort their own clothes to make laundering easier. This one isn't perfected yet, but it's close.

I keep a stopwatch handy, and when we make regular trips (as to church, the grocery, or the bank) I try to figure the most efficient, economical, and pleasant route.

Of course, not everybody cares to use a stopwatch and odometer for actual measurements; but don't we do the same thing just naturally?

Women are natural engineers. Look at Lillian Gilbreath, the first woman industrial engineer. She and her husband, Frank, pioneered the field of "efficiency experts", as they were first called. She was also the mother of twelve in "Cheaper By the Dozen". With 12 children, you have to organize and systemize!

Any woman who can prepare a Thanksgiving dinner can be an engineer. Look at what is involved:

- You are meeting deadlines - the various dishes require separate methods and times for preparation, yet everything should be finished at the same time.
- You are managing resources - and with today's food prices, that job is increasingly difficult.
- You are performing plant layout - when you arrange seating for 12 where 4 normally sit to eat.
- You are developing assembly line procedures - 12 pear salads to make? First set up the dishes, then put in each some lettuce, the pears, mayonnaise, and a cherry on top.

In these normal "housewife" duties, the woman is naturally looking for easier, faster, cheaper ways to get the job done without sacrificing quality. That is what industrial engineering does in business and industry. Only the products are different.

Industrial functions are simulated in the running of a home:

Management and Administration

Finance and Accounting

Purchasing and Cost Control

Employee Development & Training, Morale & Motivation  
Labor Relations (like trying to get a child to clean  
his room)

Food and Facilities

Transportation

Traffic Management (coordinating the coming and going of  
active teenagers, husband, your own activities)

First Aid

Security

Communications (notes on the refrigerator door?)

Maintenance

Public Relations (when your child breaks the neighbor's  
window)

Warehousing (finding room to store Christmas decorations,  
Easter baskets, Halloween costumes).

And who is the General Manager of the home?

MOM.

Dad may be the owner, or the Chairman of the Board, but the actual  
day-to-day management is usually left to Mom.

If a woman can run a household efficiently, she can do the same  
in a business. All the pressures, problems, and triumphs in business  
are present to some comparable degree in the home.

Conversely, engineering training can help you improve household  
functions. I have started a time study on myself because I seem to  
have more to do than can be done in 24 hours a day. I am in the process  
of analyzing how my time is actually spent, so that I may give priority  
to my interests. Surely I can find a better way to get things done!

Did you ever hear God's engineering specifications for a Mother?  
Erma Bombeck wrote a column on the subject, and this is what she said:

When the Good Lord was creating Mothers He was into His sixth day of "overtime" when the angel appeared and said, "You're doing a lot of fiddling around on this one."

And the Lord said, "Have you read the spec on this order?"

"She has to be completely washable, but not plastic.

"Have 180 movable parts...all replaceable.

"Run on black coffee and leftovers.

"Have a lap that disappears when she stands up.

"A kiss that can cure anything from a broken leg to a disappointed love affair.

"And six pairs of hands."

The angel shook her head slowly and said, "Six pairs of hands...no way."

"It's not the hands that are causing me problems," said the Lord. "It's the three pairs of eyes that Mothers have to have."

"That's on the standard model?" asked the angel.

The Lord nodded. "One pair that sees through closed doors when she asks, 'What are you kids doing in there?' when she already knows. Another here in the back of her head that sees what she shouldn't but what she has to know, and of course the ones here in front so that she can look



at a child when he goofs and say, 'I understand and I love you' without so much as uttering a word."

"Lord," said the angel touching His sleeve gently, "come to bed. Tomorrow..."

"I can't," said the Lord, "I'm so close to creating something so close to myself. Already I have one who heals herself when she is sick...can feed a family of six on one pound of hamburger...and can get a 9-year-old to stand under a shower."

The angel circled the model of a Mother very slowly. "It's too soft," she sighed.

"But tough!" said the Lord excitedly. "You cannot imagine what this Mother can do or endure."

"Can it think?"

"Not only think, but it can reason and compromise," said the Creator.

Finally, the angel bent over and ran her finger across the cheek. "There's a leak," she pronounced. "I told you you were trying to put too much into this model."

"It's not a leak," said the Lord. "It's a tear."

"What's it for?"

"It's for joy, sadness, disappointment, pain, loneliness and pride."

"You are a genius," said the angel.

The Lord looked somber. "I didn't put it there."

That's one of my favorite writings.

Now, since I can't tell you how to be successful engineers from experience, I would like to share with you four concepts or philosophies that I intend to keep in mind as I pursue my own engineering career.

The first of these is, NOTHING GREAT WAS EVER ACHIEVED WITHOUT ENTHUSIASM.

In Shakespeare's play, Hamlet says, "Assume a virtue, if you have it not." We can't always be bubbling with excitement; and yet, don't you know someone who seems to be? He or she may have plenty of problems, but somehow the enthusiasm makes solving them easier. Enthusiasm helps you to be happier, healthier, less anxious, more optimistic. (An optimist, you know, is one who enjoys the scenery along the detours.)

Enthusiasm on the job can mean the difference between success and failure. An enthusiastic, smiling approach to a problem makes the work easier--and it is definitely more pleasant to be around such people.

Second, DO NOT SANCTION INCOMPETANCY.

"Sanction" means "Authoritative permission or approval that makes a course of action valid; support or encouragement, as from public opinion or established custom."

If a system, method, or custom in a business is no longer effective or efficient, it should be up-dated or eliminated.



If the secretary can't type, after given an opportunity to improve, she should be replaced with one who can.

If a supervisor fudges reports because they make him look bad, and I know about it but ignore it, I am "sanctioning incompetency".

If the company I am with is not up to par, and I cannot effect a change, I sincerely hope that I have the fortitude to leave. I do not want to sacrifice my standards of competence because the pay is good or the hours are convenient.

But first of all, I plan not to sanction incompetency in myself-- I intend to be a high-grade, quality engineer.

The third concept is, IF YOU'RE NOT PART OF THE SOLUTION, YOU'RE PART OF THE PROBLEM.

No one wants to be a part of the problem, but you know them--the catty gossipers, the habitual complainers, the ones who smoke in elevators and busses, the litterbugs, and the ones who throw chewing gum on the sidewalk for you to step on.

If I don't vote intelligently, I have no complaint about our government.

Unless I actively work towards solutions to our world's problems, then I am a passive part of those problems.

If I can follow this concept, utilizing my engineering training and education, my career will be well worth the struggle.

The last concept is this: FREEDOM IS THE RIGHT TO CHOOSE YOUR OWN RESTRICTIONS.

One always has a choice. Even in death, you have a choice to die screaming or to die quietly. You choose to pay taxes or not pay and face jail. You choose whether to eat healthy foods, have your teeth fixed, let your teeth rot, whatever. But you choose.

You choose: to get a higher education or not,  
what career field to follow,  
whether to marry, have children,  
whether to do that now or later,  
whether to stay near home or travel,  
which lifestyle to belong to.

You decide what you do--even if it is a decision between following your parents' desires and your own.

You decide where you work--and there is no such thing as involuntary unemployment. You could get a job at any given time--only your own restrictions modify your opportunities, and you choose your restrictions.

I intend to remember that I am what I do, and I may do what I choose. I don't want to waste any part of my life in unsatisfactory or non-productive employment. It wouldn't be fair to me, or to my employer, or to my client.

If I can remember and follow these four concepts, I should be able to look back on a successful and satisfying career.

I wish the same for each of you.

## Erma Bombeck



When the Good Lord was creating Mothers He was into His sixth day of "overtime" when the angel appeared and said, "You're doing a lot of fiddling around on this one."

And the Lord said, "Have you read the spec on this order?"

**"SHE HAS TO** be completely washable, but not plastic.

**"Have 180** movable parts . . . all replaceable.

**"Run on** black coffee and leftovers.

**"HAVE A LAP** that disappears when she stands up.

**"A kiss that can cure anything from a broken leg to a disappointed love affair.**

**"And six, pairs of hands."**

**THE ANGEL** shook her head slowly and said, "Six pairs of hands . . . no way."

"It's not the hands that are causing me problems," said the Lord. "It's the three pairs of eyes that Mothers have to have."

"That's on the standard model?" asked the angel.

**THE LORD** nodded. "One pair that sees through closed doors when she asks, 'What are you kids doing in there?' when she already knows. Another here in the back of her head that sees what she shouldn't but what she has to know, and of course the ones here in front so that she can look at a child when he goofs and say, 'I understand and I love you' without so much as uttering a word."

"Lord," said the angel touching His sleeve gently, "come to bed. Tomorrow . . ."

"I can't," said the Lord, "I'm so close to creating something so close to myself. Already I have one who heals herself when she is sick . . . can feed a family of six on one pound of hamburger . . . and can get a 9-year-old to stand under a shower."

**THE ANGEL** circled the model of a Mother very slowly. "It's too soft," she sighed.

"But tough!" said the Lord excitedly. "You cannot imagine what this Mother can do or endure."

"Can it think?"

**"NOT ONLY** think, but it can reason and compromise," said the Creator.

Finally, the angel bent over and ran her finger across the cheek. "There's a leak," she pronounced. "I told you you were trying to put too much into this model."

"It's not a leak," said the Lord. "It's a tear."

**"WHAT'S IT** for?"

"It's for joy, sadness, disappointment, pain, loneliness and pride."

You are a genius," said the angel.

The Lord looked somber. "I didn't put it there."

RECEIVED

FEB 13 1975

A. J. HARNESS