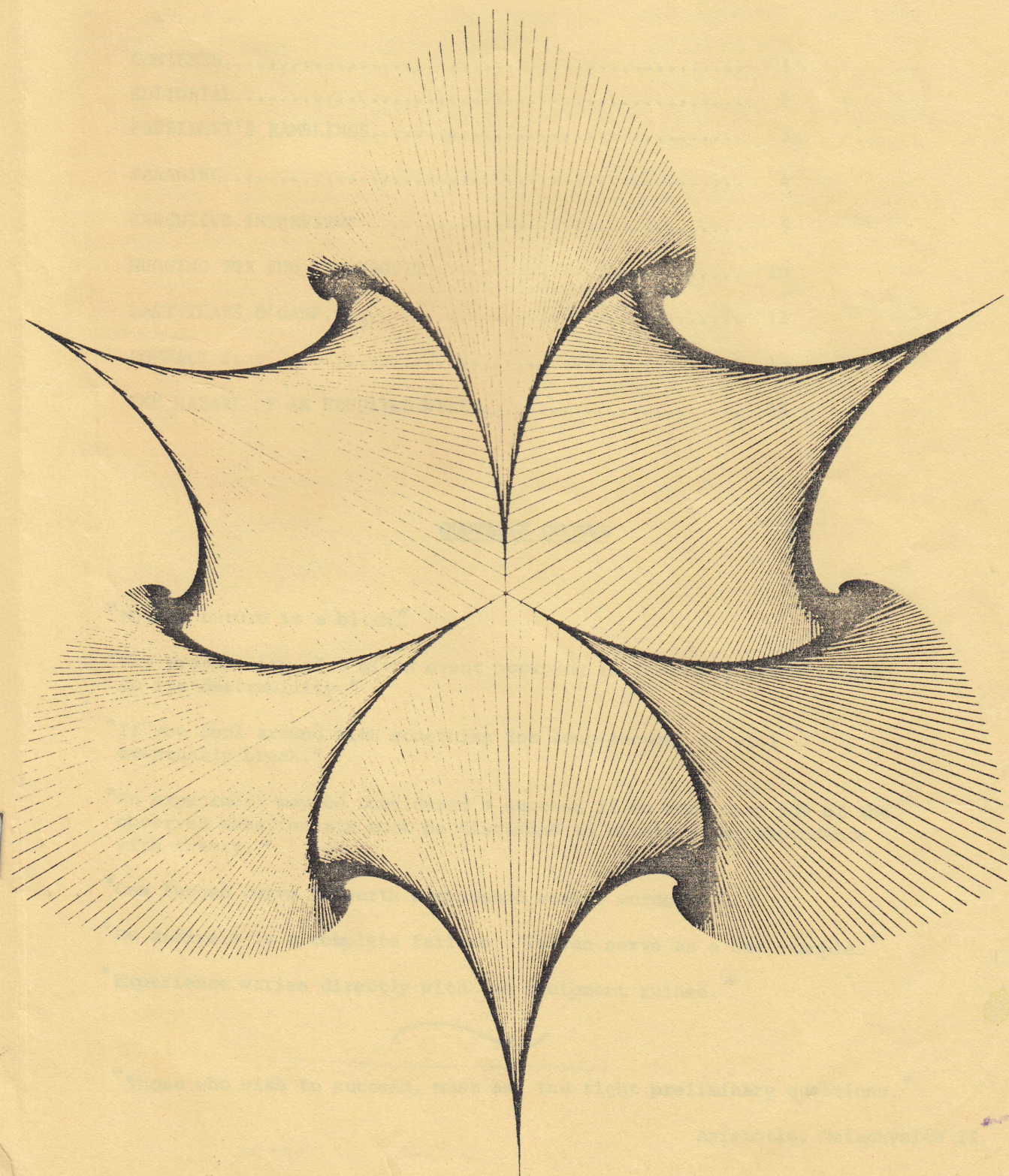


**SCIENCE**

**BULLETIN**

CONTENTS





The Bulletin is the infrequently published journal of the  
ADELAIDE UNIVERSITY SCIENCE ASSOCIATION.

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### QUOTABLE QUOTES

"Mother nature is a bitch."

"The probability of a given event occuring is inversely proportional to its desirability."

"If you fool around with something for long enough, it will eventually break."

"An experiment may be considered a success if no more than 50% of the observed measurements must be discarded to obtain a correspondence with theory."

"One fudged curve is worth a thousand weasel words."

"No analysis is a complete failure - it can serve as a bad example."

"Experience varies directly with the equipment ruined."

---

"Those who wish to succeed, must ask the right preliminary questions."

Aristotle, Metaphysics II

# Editorial

Well, this must be the first issue of the bulletin for at least a year and as such is a pretty impressive effort even if I do say so myself.

The Bulletin has always been plagued by lack of contributors, but I hope that this year things are going to change. We have a good group of article collectors this year. (If you see a group of well muscled males and females wandering the Campus with baseball bats and nailed boards you will know that someone hasn't made their deadline.....yet.) We also seem to have an active humerous bunch of first years so it could be the best year the Bulletin has seen in a long time.

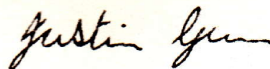
Many of you reading this issue will be first years and new members so you will probably have little or no idea of what to contribute. I am now going to answer this very important and easy question. ANYTHING YOU WANT TO SEE IN THE BULLETIN. It doesn't have to be of a scientific nature. Flip through some old Bulletins and see how much of them is science.

You can put anything in a Bulletin that passes the Editors not so strict eye. Some ideas would be you favourite drink recipe (Cocktails and others), what you did on your last wild party night or better still what other people did on their wild party night. This issue should also give you some idea of what we are looking for.

We would also like science articles. Perhaps you have a pet subject you know so much about that you would just love to write it down and give it to the bulletin. Essay writing is an integral part of being a successful researcher so why not get in some early practice.

Well this editorial is starting to drag on a little bit so I will now sign off and let your stimulated minds go to work on next issues bits and pieces.

Yours in insanity,



Justin Gum, Guest Editor.

The Bulletin is published with the kind help of a lot of deranged morons who have nothing better to do than spend their useless time on inane projects such as this heap of bat droppings you are about to read.

It comes out bi-monthly or quarterly or yearly or not at all depending on the deranged lunatic who happens to be in charge at the time.



PRESIDENT'S RAMBLINGS

My name is Paul Brooks, and I am the President of the Science Association this year. Firstly I'd like to welcome all our new members and say 'Hi' to all the old ones. You are all going to be hearing a lot from me and other members of the Premier Club of the Premier Faculty, whether you like it or not. This year promises to be a dynamic year for A.U.Sc.A., with a zealous Bulletin Committee (and haven't they done a great job on this one, ladies and gentlemen!). Various Officers and a Committee that will bring various activities to you.

Meetings are held once a month, and I urge all of you to attend if you can. They give you a chance to meet the people who spend your money, and for you to have a say in how it should be spent. With a membership of over 250, we are one of the biggest clubs on campus, and almost certainly the oldest - we are the 96th Committee to have held office, which means the A.U. Science Association was formed very soon after the University itself was established. We have the original letter to prove it!

One problem with a club of this size is communication. Bulletins like this help us to keep in touch, and meetings are generally the only other way of keeping abreast of events, but we want to know your feelings, gripes, suggestions, etc. - What should we be doing that would interest you? We are all exceedingly contactable, either by phone, our personal pigeon-holes, or through the Club's pigeon-hole in the S.A.U.A. office (also known as the Student Activities Office.) Just ask at the front desk about it. Remember, to keep involved you have to keep in touch. Check your pigeon-hole regularly, and I hope to see as many of you as possible on the forthcoming Annual Winery Tour. Places will be limited, so be early when tickets are available.

I deny almost everything I am supposed to have said in the interview later in this publication!

Yours in another  
year of study,



Paul Brooks  
A.U.Sc.A. President



FAARCING

A Participants View

By Justin Gum

I was one of the depraved lunatics who was insane enough to put myself down as a Faarcer.

Not having witnessed this obscene spectacle the year before, when I was a fresher (yes, a fresher! I said it and I will say it again. Fresher! Fresher! Fresher! So there!!), I unhesitatingly put my name down for what I thought might be some good, clean fun (Ha, Ha, Ha!).

It was just the opposite. It started off alright, but the horror and revulsion of it crept up on you as you ran, staggered, crawled around the course.

The beer first off was quite nice, apart from the verdigris colour and the added pepper. However, the sausage roll smeared with bacon dip and sprinkled with coffee, while looking like a chocolate éclair, was far from gourmet cooking. One bite was enough to make even the most ravenous Bugblatterbeast run down and join the choir invisibile. We all had half a roll each. Ecch!

Yet more horrors were in store for us and once started, the course must be completed, even if your prone, limp and comatose body has to be carried across the finish line.

Next came the "find the marble at the bottom of the flour bowl". Innocent enough, but some turkey had only placed three (3) marbles in our bowl. When it came to my turn, I spent 30 seconds nosing around in flour, soggy with Mathew's, Remco's and Alison's saliva, as well as being littered with sausage roll fragments and green from the beer. Not a pretty sight!

I ran to the next checkpoint at the opposite end to be greeted by a plate of cold spaghetti travelling at approximately 50 KPH aimed directly at my face. This combined well with the flour and the next layer, being a very fast moving plate of cornflakes, congealing to a smooth mixture on my face. If this isn't a surefire cure for zits, I don't know what is.

Now came the most gruelling part of the course, the run around Union Hall. Most students, especially after the summer vacation, could not run 50 feet to a free keg, let alone this marathon.

Somehow, I survived. The rest would be easy. I was into the final stretch. All my competitors were behind me. I had only the orange, sardine milkshake, the hard-boiled egg and the sweet, salty, black coffee. Did I say easy???

I downed the milkshake. Luckily, the sardines drained out, down my chest. The egg too, disappeared.

Finally, all I had left to consume was the coffee. Could my stomach handle this one last assault? Would the mess already existing on my face part to allow me to drink? Would I live?? I can't remember. Oh, yes I can, the answer to all the above was yes, although some people have challenged the validity to the last answer. I drained the coffee dregs and collapsed into the food stained arms of my comrades and we fell jointly into a seething and putrid mess on the famed Barr-Smith Lawns.

By the grace of Goddess, I survived to tell this tale and warn others of the horrors of Faarcing and to tell all interested parties that all these culinary delights may be purchased any weekday from the Mayo Refec.

All Hail Discordia!  
Spock Lives!  
TANJ



EXECUTIVE INTERVIEWS

This year we have added to our bulletin, interviews with the Executive Committee, so all you new members can get to know those people you met on the O-Camp just that little better.

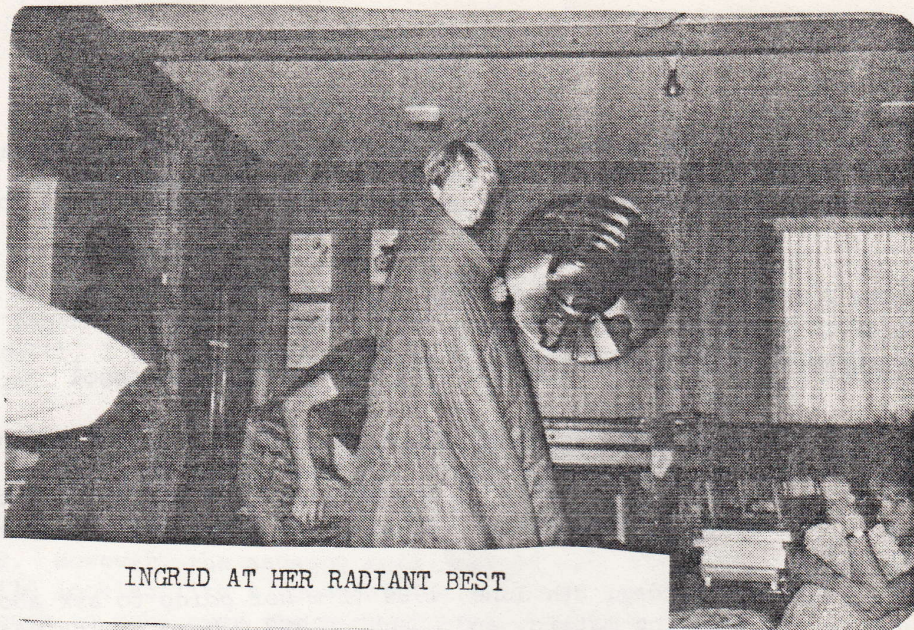
PRESIDENT: Paul (Bignose) Brooks  
BORN: Yes! 16th February, 1965  
SCHOOLS ATTENDED: Belair Primary School & Blackwood High School  
CURRENTLY ENROLLED IN: Computing III & Physics III  
PAST SUBJECTS: Maths 1, Physics 1, Chemistry 1, Computing 1H, Astronomy 1H, Applied Maths IIA, Physics II & Computing II.  
MAJOR HIGHLIGHTS IN LIFE: Saturday, 8th June, 1985 (*I'm not going to ask about that one*) passing matric, and...ahh...1983 O-Camp as 1st year.  
FAVOURITE HOBBIES: Women, astronomy (*even though he can't tell how long it takes for the sun to set*), computing is pretty fun...and drinking, not necessarily in that order. (*He also enjoys being photographed in compromising situations as you can see from the photos with this interview*).  
FAVOURITE TV SHOWS: None, don't have time to watch T.V.  
SEXUAL PREFERENCE: I want to be a female (*that doesn't really answer the question...*) No, no. I really prefer females. (*Thank you Paul for that boring yet boring report of your life*)



THE PRESIDENT AND TREASURER AT A JOINT CHEIFS OF STAFF MEETING

\* \* \* \* \*





INGRID AT HER RADIANT BEST

PRESIDENT OF VICE: Ingrid (Kinky) Reimer  
BORN: Kingswood Maternity Hospital (13.11.67)  
SCHOOLS ATTENDED: Glenunga High School, Linden Park Primary School  
SUBJECTS CURRENTLY ENROLLED IN: Computing 1H, Physics 1, Maths 1, Chemistry 1, Astronomy 1H

MAJOR HIGHLIGHTS IN LIFE: The film night on the 1985 O'Camp and Burnside Junior mayor 1984 (Wow after a slow start you certainly sped up. By the way, we need a new pool. Can you put it through?)

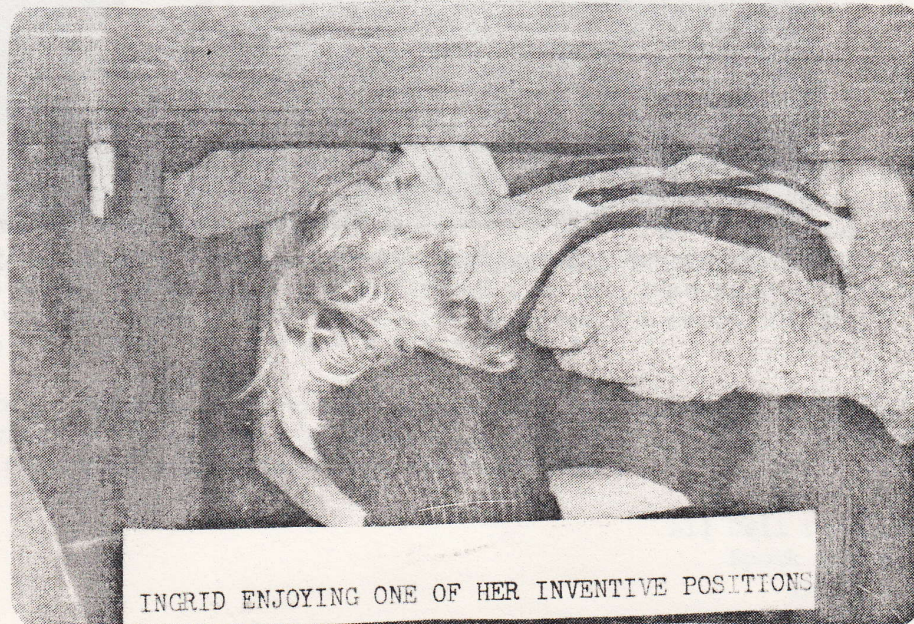
FAVOURITE HOBBIES: Sex, sailing, lacrosse, sex, sex and more sex. (A lady of diverse talents it seems. She also enjoys getting drunk at my parties and spilling vodka & orange on the carpet).

FAVOURITE ANIMALS: Puppy dogs and pussies. (Now you know why she's called Kinky)

SEXUAL PREFERENCES: Inventive positions, S & M (Particularly biting people) and the outdoors.

Thank you Kinky for a very....interesting talk. By the way if your free later....?

\* \* \* \* \*



INGRID ENJOYING ONE OF HER INVENTIVE POSITIONS



ASSISTANT SECRETARY: Justin (Lusty) Gum

BORN: No, created (you've got to be kidding!) (10.3.66)

SCHOOLS ATTENDED: Linden Park Primary & Saint Peters College (Spooner)

CURRENTLY

ENROLLED IN: Geology II, P & M Geology II, Physics 1 (for the first time)  
(Oh yeh, tell us another one!)

PAST SUBJECTS: Geology 1, Computing 1H, Statistics 1H, Chemistry 1 and  
Biology 1

MAJOR HIGHLIGHTS

IN LIFE: Going to Egypt (Not the trip! Not the trip!) 1984 O'Camp  
(especially the bar night) (You mean when you spent the night  
in the girls dorm instead of on the beach) and finishing the  
1981 marathon (Into S & M are we!)

FAVOURITE HOBBIES: Wargaming, roleplaying, (fascist bullyboy) Deb, physical  
activity of any kind especially waterpolo (Oooh!) reading  
SF and organising SF conventions (He also enjoys visits to  
N5, doesn't he?)

FAVOURITE TV SHOWS: A team, Doctor Who, Star Trek, Rush, Mash etc. etc. etc....  
Thank you Justin  
Blakes Seven, Philip Marlowe I.I., Magnum, Mastermind etc.  
etc. etc....

OK that will be fine Justin  
Battlestar Galactica, Timeless Land, Beyond 2000, Callum,  
Get Smart, Lost in Space, Vultron, protector of the Galaxy,  
etc. etc. Shut up! Shut up! Down! Get off of me! Help!

\* \* \* \* \*

TREASURER: Alison (Waterwings) Woodget

BORN: Thurstone, Suffolk 31.3.66 (Whinging Pomme)

SCHOOLS ATTENDED: Hardwick County Primary School, Horringer Court, Middle School,  
The Heights School (Multinational, aren't we?)

CURRENTLY

ENROLLED IN: Geology II, P & M GeologyII, Applied Maths IIB and Physics 1  
(Clever girl doring an overload because you failed Physics  
on the first pass!)

PREVIOUS SUBJECTS: Maths 1M, Physics 1 (Ha! Ha!) Chemistry 1, Geology 1

FAVOURITE PASTIMES: No comment! Just bleep it or write classified or censored  
over it or something (Probably because sex and square  
dancing are disgusting pastimes that no sane person would  
own up to)

MAJOR HIGHLIGHTS: 26th August, 1983(?) Treasurer of Book Exchange 1984 (you  
have got to be joking!) and you had better not "meeting Paul"  
there or he will kill me.

FAVOURITE ANIMALS: Pussies (Kinky! I always wondered why she sat next to Ingrid  
in meetings)

FAVOURITE TV SHOWS: Beyond 2000

FAVOURITE DRINK: I've got more than one (Really!) No orgasm (no comment)

FAVOURITE MUSICIANS: Dire Straits, Split Enz, Icehouse and Phil Collins.  
Thank you Alison, and don't worry I won't print anything  
defaming your character (Much!)

\* \* \* \* \*



SECRETARY: Deborah (+i=L) Anne Bishop

BORN: Uncertain (Where or if?) 21st June, 19 66

SCHOOLS ATTENDED: West Beach Primary School, Woodlands C.E.G.S.

CURRENTLY  
ENROLLED IN: Applied Maths IIA, Physics II, P & I Chemistry II, Applied Obscenities II (very clever!)

PREVIOUS SUBJECTS: Maths 1, Computing 1H, Astronomy 1H, Physics 1, Chemistry 1, Abusive Language 1 (Hey stop it! Your putting me out of job)

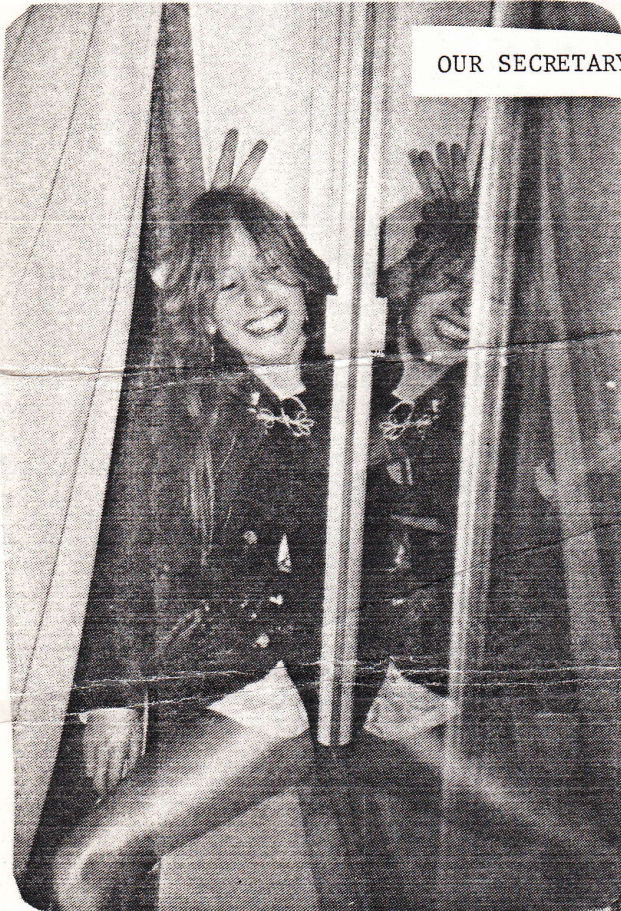
MAJOR HIGHLIGHTS  
IN LIFE: Coming (cumming?) to Uni., falling off a windsurfer (?), winning blue morals point Award (for orgies) while discussing physics with Professor Thomas. (Also putting on very successful orgies!)

FAVOURITE PASTIMES: Orgies=parties=sex=men=squash=receiving obscene mail messages (She also enjoys tattoing her nose in black spots when she gets bored in Chemistry).

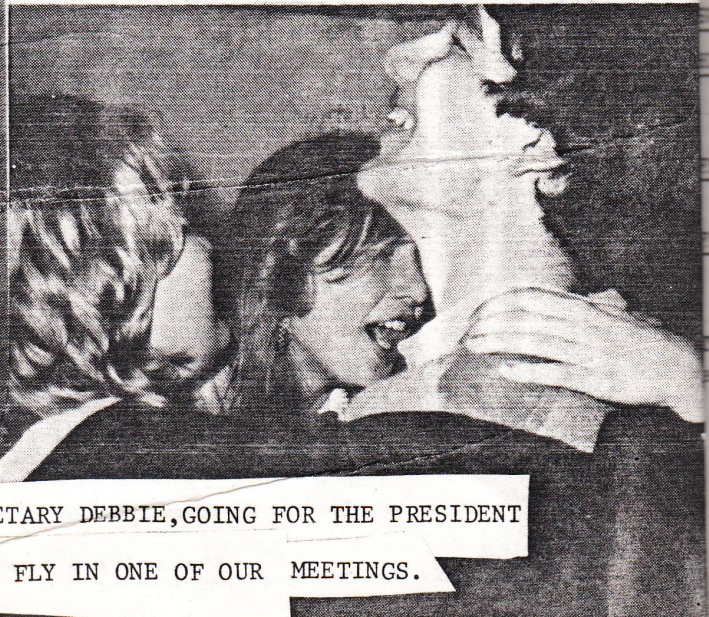
FAVOURITE ANIMALS: Cats, dolphins and men...(This seems to be a standard reply!) and unicorns. (That's very interesting....Freudian too!)

FAVOURITE  
MUSICAL ARTISTS: David Bowie, Icehouse, Pink Floyd and whoever wrote "You Give Me Head!" (I don't have to make up things to incriminate her she does it perfectly well all by herself)

\* \* \* \* \*



OUR SECRETARY IN A COMPROMISING POSITION.

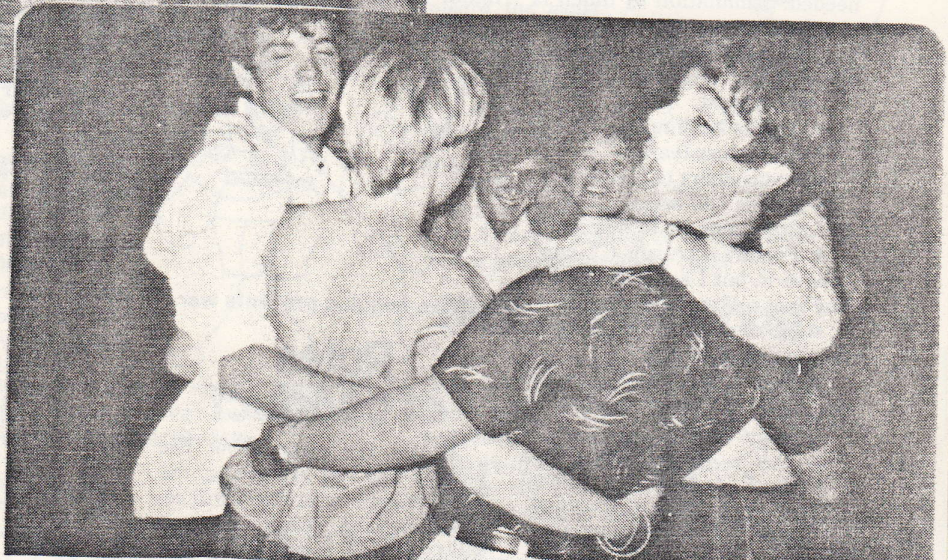


OUR SECRETARY DEBBIE, GOING FOR THE PRESIDENT AS WORDS FLY IN ONE OF OUR MEETINGS.

ASSISTANT I  
 HORN:-  
 SCHOOLS AT  
 SUBJECTS EN  
 HIGHLIGHTS  
 FAVOURITE I  
 FAVOURITE I  
 Thanks Joh  
 everyone e



TREASURER ALISON ENGAGING IN ANOTHER OF HER PASTIMES, FAAACING WITH  
ASSITANT-SEC. JUSTIN.



ASSORTED EXEC. MEMBERS ENGAGING IN ONE OF THEIR REGULAR ORGIES.

ASSISTANT TREASURER: John (Not really, No!) Lindsay

BORN: 7th August, 1967

SCHOOLS ATTENDED: Pt. Fairy Primary School, Pulteney Grammar School, St. Peters College

SUBJECTS ENROLLED IN: Physics 1, Chemistry 1, Maths 1, Computing 1H, Philosophy 1H

HIGHLIGHTS OF LIFE: The day I got my first computer consultants job, buying my first computer and passing matric. (I can't find anything to criticise)

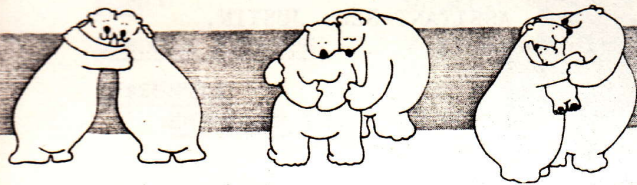
FAVOURITE HOBBIES: Repairing cars in general (In general what.. Hospital?) and feeding my goldfish (But what does he feed them?)

FAVOURITE MUSICIANS: The Kinks, Emerson Lake & Palmer, and Dire Straits.

Thanks John and all the rest of you for putting up with my interview and for everyone else, just wait till you become executive committee members.

SIGNED THE PHANTOM INTERVIEWER





# A great cure for

# A HUG FOR

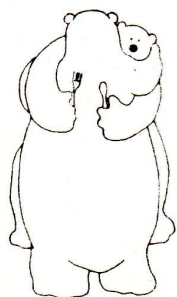
## Bear hug

There's nothing like a hug for curing the blues and feeling good

### Theory

Touch is not only nice. It's needed. Stimulation by touch is absolutely necessary for our physical as well as our emotional well-being. Hugging:

- Feels good.
- Disperses loneliness.
- Overcomes fears.
- Opens doors to feelings.
- Builds self-esteem ("Wow! She actually wants to hug me!").
- Fosters altruism ("I can't believe it, but I actually want to hug that old son-of-a-gun!").
- Slows down aging; huggers stay younger longer.
- Helps curb appetite; we eat less when we are nourished by hugs — and when our arms are busy wrapped around someone.

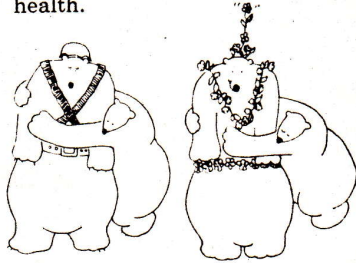


- Hugging also:
  - Is ecologically sound, does not upset the environment
  - Is energy-efficient, saves heat
  - Is portable
- Requires no extra special equipment
- Demands no special setting; any place from a doorstep to an executive conference room, from a church hall to a football field, is a fine place for a hug!
- Makes happy days happier
- Makes impossible days possible
- Imparts wonderful feelings of belonging
- Fills up empty places in our lives
- Keeps on working to dispense benefits even after the hug's release.
- Hugging also:
  - Eases tension
  - Fights insomnia
  - Keeps arm and shoulder muscles in condition
  - Provides stretching exercise if you are short
  - Provides stooping exercise

if you are tall

- Affirms physical being
- Is democratic; anyone is eligible for a hug.

While there are many forms of touching, hugging is a very special one that contributes in a major way to healing and good health.



Besides, hugging prevents war.

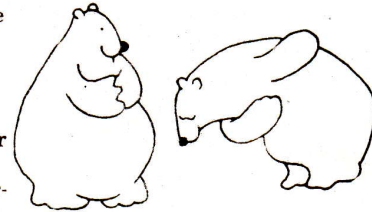
### Rules of conduct

If you are clear about the kind of hug you are giving, the other hugger most likely will respond in kind. If not, you may want to have a talk about the importance of just-friendly hugs in your relationship.

Be certain you have permission before giving a hug. Often permission to hug is implicit in a relationship. Your sweetheart or a close friend probably will welcome hugs almost any time. However, you still need to respect the other's need for privacy and space.

Respect the other's verbal and nonverbal messages. Most of the time you will be aware of what is needed and acceptable.

Also be sure to ask permission when you need a hug. Huggers must sometimes be huggées. Hugging-for-health is a practice of sharing, rather than of just giving or just taking.



May I have this hug?

In the traditional bear hug (named for members of the family Ursidae, who do it best), bodies are touching in a powerful, strong squeeze that can last five to 10 seconds or more.

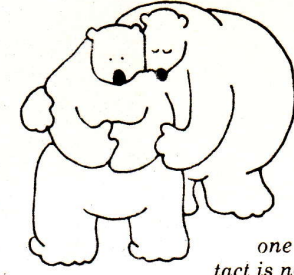
The feeling during a bear hug is warm, supportive, and secure. Bear hugs are for:

- Those who share a common feeling or a common cause
- Parents and offspring. Both need lots of assuring bear hugs
- Grandparents and grand-offspring. Don't let grandparents out of family bear hugs
- Friends (this includes marrieds and lovers, who hopefully are friends, too)
- Anyone who wants to say, wordlessly, "You're terrific!" or, "I'm your friend; you can count on me."



### Cheek hug

The cheek hug is very tender, gentle hug that often has a spiritual quality. It can be experienced comfortably sitting down, standing up, or even with one sitting and one standing, as full body contact is not necessary.



- A cheek hug is a tasteful way to:
  - Greet an elderly friend or relative who is seated
  - Say a wordless "I'm sorry" about a friend's disappointment
  - Share a friend's joy at a happy occasion, like wedding or graduation. (This is a considerate hug for congratulating the principals in reception lines.)

### Visualization

When you are feeling the need for support after a stressful day, visualize a favourite friend who is also a good hugger, giving you a very firm and supportive hug. Imagine that friend holding you and offering you reassurance and love.



Keep the picture and the feelings in your mind for as long as you need comfort.

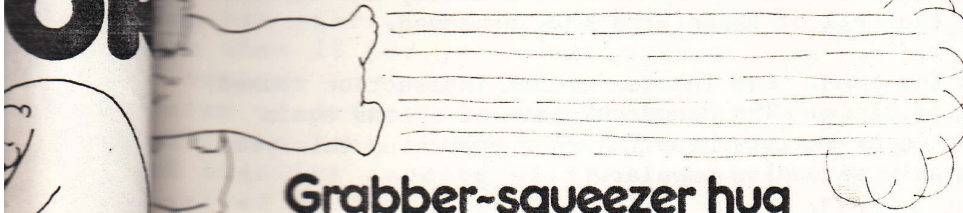




(almost) anything...



# re fo OR ALL REASONS



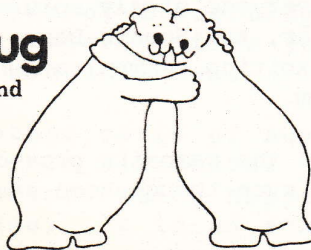
## Grabber-squeezer hug

The grabber-squeezer hug holds the record for brevity. One hugger runs up to the other, wraps arms about another, gives a fast squeeze before letting go, then dashes away. The one so hugged must be alert in giving a squeeze in return, in order to receive maximum benefit from this hug. Use the grabber-squeezer:

- In the workshop or the kitchen
- To wish someone luck before a performance
- As a silent translation of "I like you a lot, but I'm in a terrible hurry!"

## The A-frame hug

Stand facing each other, wrapping arms around shoulders, sides of heads pressed together and bodies leaning forward and not touching at all below shoulder level.



The A-frame hug is most appropriate for new acquaintances or professional colleagues, or in situations that require a degree of formality. Because it is relatively non-threatening, it is comfortable for shy or unpractised huggers. An A-frame hug is particularly apt for a great-aunt whom you haven't seen since you were a toddler or a new daughter-in-law.

## Group hug



The group hug is a very popular hug for good friends sharing in an activity or project. The group forms a circle — its members standing as close together as possible, arms around shoulders or waists — and squeezes.

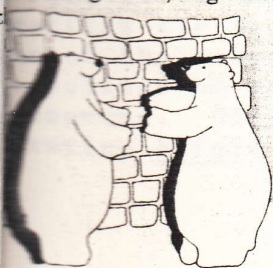
Besides good feelings of support, security, and affection, group hugs often impart a sense of unity and universal belonging.

- Group hugs are good for:
- Classmates, teammates
  - Hardworking committees
  - Any bunch you like.

## Environments

A place of beauty enhances the experience of hugging. However, if the setting seems shabby or bleak, it can be totally transformed just because you are sharing a hug.

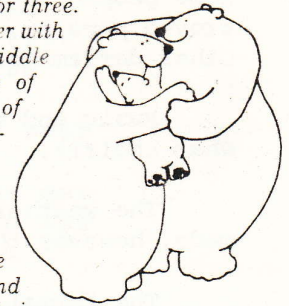
Any place is the right place for hugging when the heart is open. So hug often, hug well.



## Sandwich hug

The sandwich hug is a lesser known variety, but once you experience its warmth and security, you'll want to share this one often.

This is a hug for three. Two face each other with the third in the middle facing either one of the others. Each of the two on the outside reaches toward the waist area of the other and hugs. The one in the centre wraps arms around the waist of the facing hugger.



The sandwich hug is handy for:

- Three good friends
- A couple wishing to comfort someone or two parents and a child.

## Side-to-side hug

The side-to-side hug, or the lateral squeeze, is a great hug to get and give while walking along together. As you stroll side by side with an arm around the other's waist or over the shoulder, once in a while give a generous squeeze.

The side-to-side hug provides a joyful moment while:

- Walking to a bus-stop.
- On a hike or an archaeological dig
- Waiting to get into a movie.



## Heart-centred hug

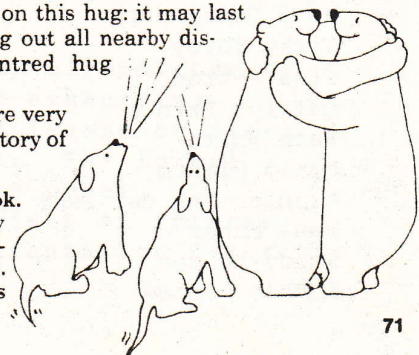
Many consider the heart-centred hug to be the highest form of hugging, and official Hug Therapists feel, too, that it is indeed very powerful.

The heart-centred hug begins with direct eye contact as the two huggers stand facing each other. Then the arms are wrapped around shoulders or back. Heads are together, and there is full body contact. The hug is firm, yet gentle.

There is no time limit on this hug; it may last several moments, shutting out all nearby distractions. The heart-centred hug feels right:

- When the huggers are very old friends with a long history of criss-crossing paths.

From The Hug Therapy Book.  
Copyright © 1983 by  
Kathleen Keating. Illustrations by Mimi Noland.  
(CompCare Publications USA).





by Beat Bodmer

As per usual, the aim of the Orientation Camp was to bring together a large number of 1st year science students, to let them get to know each other and seniors from A.U.Sc.A., to inform them what to expect at University and to have a good time. I am glad to say that all of these aims were achieved.

Life at the camp was hard for some. The intense social interaction caused some people to lose many hours of sleep. The dangerous game of spoons again proved popular, with no fatalities or serious head injuries occurring this year. Other defamatory games like stanly were also popular.

Music and singing brought some relief to the fast action elsewhere (Choir, what choir?).

The weather for most of the time was splendid and so many beach trips were made, however the rough surf made it hard to make good use of the windsurfers.

The formal dinner made everyone nicely spruced up which was a dramatic difference to the usual. Later, the Square Dance Club had the first years on the floor, learning new and exciting communication skills which really looked more like a workout at the gym.

The absence of alcohol on the campsite proved too much for some and the bar night was quite a success even though some students did partake in the classic big gargle.

I would like to thank the cooks, as everyone usually thinks cooks are hopeless, all the seniors for their assistance and to Joelle and Antionette especially.

Finally, I would really like to know just who cancelled the second bus. Maybe someone from a less successful camp?

Beat Bodmer  
Convenor

1985 O' CAMP AWARDS

Bob Bradley	Smile of the Camp Award
Sarah Howes	Compatability Rating of 90% Award
Shane Brooks	Congenital Motor Mouth Award
Edwin Daughtry	Garbage Cuts Award
Tim Hillson	Hairy Legs Award
Jenny Beer	Pirate Pete Award
Kylie LeLeu	Persistant Beggar Award
Shyamala Huilgol	Most Contoured Formal Dress Award
Stuart Verrall	Best Dressed Award
Paul Dannenburg	Technicolour Yawn Award (in shorts)
Vicky Tovey	Huggy Bear Award
Tina Petros	Cooks' Fan Club Foundation Member Award
Katrina Prince	Dangerous Dancing Award
Kate Smith	Claytons Award
Mario Bianco	Spot the Brain Cell Award
Brenton Van der Peer	53 Hours at Kursa Award
Paul Maher	Compatability Rating of 90% Award
Sandy Menpes	Miss O'Camp
Angelo Lepore	Mr. O'Camp



## COMPACT 2

Like all other established universities in Australia, the University of Adelaide has been in a financial squeeze for more than ten years. Faced with a budget declining in real terms by more than 2% per year over such a long period, it has been forced to respond in imaginative ways. One of these responses is the system of determining academic staffing levels by a COMPACT. While the rest of this article deals with some of the positive and negative aspects of the latest COMPACT, no-one should be deceived on the overall consequences of this neglect. The highest quality of university teaching and research is the best hope for our country in an increasingly competitive, and scientifically based international economic scene. However our universities are in a far worse state now than they were in the late 60's. This is a recipe for national economic suicide.

In principle the formulation of a staffing plan for the whole university over the next three to five years is an imaginative response to our financial woes.

In other countries, and other parts of Australia the response has been to simply freeze all posts. This has often led to inequities for those departments which happen to have staff members retire during the freeze. It is an academically undesirable remedy, because staffing cuts are made at random, not on the basis of reason or need.

In the first COMPACT at Adelaide University (which covered the period 1982-1985 inclusive) a long process of consultation on general principles was followed by an agreement on staffing levels for each Faculty. The decision on staff for each department was made at the Faculty level - by the people best qualified to make these decisions. I was not here at the time these decisions were made, so I have no detailed knowledge of the basis on which the Faculty staffing levels were decided in COMPACT 1.

I am aware of much of what happened with COMPACT 2, and since that is already affecting the future of the Faculty of Science in important ways, it is this which I shall now discuss. Let us begin at the bottom line - the Faculty of Science is to be cut by 7 staff members. This decision was made at a time when Australia trains (per capita) less than one tenth of the number of scientists trained by Japan - a nation which puts our raw materials to good use, generating employment in Japan.

COMPACT 2, was generated in closed session by a committee of 10 Deans. In a series of close to forty long and exhausting meetings the Deans somehow agreed on the staffing levels of every one of the seventy departments in this university. The formal guidelines on which these decisions were made were never announced. Clearly they should have been the subject of intense scrutiny before any meetings were held. No representation before



the committee by the chairmen and professors\* of the departments whose futures were being decided was permitted. True, they were represented by the Dean of their Faculty. However, our Faculty has 10 departments covering areas ranging from molecular biology to quarks to geophysics. The Deans of the Faculties of Music (17 academic staff) and Architecture (14 academic staff) to choose two extreme examples, had a much easier job. Furthermore they had equal voting power.

I simply do not believe that the committee of Deans was in a position to make an informed decision about staffing levels in departments within our Faculty. Yet the process of trimming 7 members of staff was by majority vote, department by department.

From the report of this working party of Deans to the Education Committee (which approved it), one can guess at the basis on which the decisions were made. The overwhelming consideration was weighted student units (WSU's). The word "research" appears only eight times in the entire report (mostly in passing mention). The working party at no stage considered quantitative evidence on research performance in any department. At no stage is any higher consideration, such as national need, mentioned. There is no thought whatsoever of encouraging students to study in areas where the nation will need them in 5-10 years time. The overwhelming argument is that many students want diplomas in commerce, and training in computing and law now.

Surely our universities, as the highest places of learning in our country, should be able to do more than respond to present consumer demand? Surely we have a duty, given limited resources, to concentrate on those areas where universities provide unique services, and to use our heads to see what our nation will need in the future.

In Australia the Universities receive 30% more funding per student than other tertiary institutions. The reason for this is that a fundamental distinguishing feature of all the universities is their role in basic research. Fundamental research is a vital, delicate thing which must be nurtured to bear fruit. Our university has right to be proud of its achievements in this area. However, the neglect of the research component particularly for our Faculty - was a major mistake by the working party of Deans. If we are not seen to place public emphasis on our research role, and to consider it of primary importance in allocating staff, how can we retain credibility with any outside body responsible for funding our operations?

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\*In our system only full professors are appointed on the basis of demonstrated academic leadership. To forbid their input was very unwise.

BY PROF. A.W.THOMAS



## IS AN EDUCATED WIFE HAZARDOUS TO YOUR HEALTH?

LUCINA SUAREZ<sup>1</sup> AND ELIZABETH BARRETT-CONNOR<sup>2</sup>

Suarez, L. and E. Barrett-Connor (Dept. of Community and Family Medicine, School of Medicine, U. of California, San Diego, La Jolla, CA 92093). Is an educated wife hazardous to your health? *Am J Epidemiol* 1984;119:244-9.

Three of four previous studies have suggested that men whose wives are more educated than they are at increased risk of coronary heart disease, defined to include angina pectoris, but one study of coronary heart disease exclusive of angina failed to show an association with educational discordance. In this study, the authors used data from a cohort of 1698 spouse pairs aged 45-79 years who were followed prospectively for nine years to determine whether discordance for education was predictive of ischemic heart disease death. In this upper-middle-class population, men with more educated wives tended to be older, had a lower socioeconomic status, and higher blood pressure levels. A significant increase in risk of all-cause and ischemic heart disease death was seen in men whose wives were more educated than they, compared with men whose wives were less educated. This risk was highest for the least educated men with the most educated wives, and was not totally explained by differences in age, socioeconomic status, blood pressure, or other risk factors. These data support a causal role for status incongruity and fatal ischemic heart disease.

### coronary disease; educational status

Recently, Haynes et al. (1) reported an excess risk of coronary heart disease in men married to women with 13 or more years of education. Differences persisted after adjustment for socioeconomic status, heart disease risk factors, and whether or not the wife worked outside the home. These results were based on a 10-year follow-up of 269 spouse pairs and 44 incident cases of coronary disease, the majority of which were angina pectoris. Most

other studies which included angina as an endpoint have found similar results (2, 4), but one study restricted to myocardial infarction found no association with spouse discordance for education (5). We reexamined this issue by assessing the relative frequency of ischemic heart disease deaths in a much larger cohort of spouse pairs who were concordant or discordant for educational status.

### METHODS

Eighty-two per cent of an upper middle-class Caucasian population participated in a survey for heart disease risk factors between 1972 and 1974. At the baseline examination, occupation of head of household, education of each participant, marital status and duration of marriage, and cigarette smoking were determined by standardized interview. Education was ascertained using

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following categories: 1) graduate and professional training; 2) college graduate; 3) partial college training, at least one year; 4) high school graduate; 5) partial high school, completed tenth grade; 6) junior high school, grades 7-9; and 7) less than seven years of school. Occupation of wife was not ascertained. Blood pressure was recorded and plasma cholesterol was determined in a standardized Lipid Research Clinic laboratory. Procedures used at the time of survey have been described previously (6, 7). Ninety-nine per cent of the studied cohort have been followed for vital status for an average duration of nine years. Death certificates were obtained for all decedents, and cause of death was coded according to the Eighth Revision of the *International Classification of Diseases, Adapted* (ICDA) by a certified nosologist. Ischemic heart disease deaths were those coded 410.0-414.9.

Analysis was restricted to couples in which the men were between 45 and 79 years of age. Educational status was trichotomized into the following categories: college graduate or greater, high school graduate, and less than high school graduate. Age-adjusted death rates were calculated by the direct method for each combination of husband's and wife's education, and for three categories of educational discordance (men whose wives had

less education, men whose wives had the same education, and men whose wives had more education than they). Differences in age-adjusted rates were tested by the Mantel-Haenszel summary chi-square with 1 df. The Cox proportional hazards model was used to determine the independent effect of educational discrepancy on all-cause and ischemic heart disease mortality after adjusting for significant covariates. Significance levels for all tests were assessed using one-sided  $p$  values.

### RESULTS

There were 1698 spouse pairs aged 45-79 years. The distribution of spouse pairs by education of husband and wife is shown in table 1. Fifty-five per cent of the couples were concordant for education.

Age-adjusted all-cause and ischemic heart disease mortality rates by education of husband and wife are shown in table 2. In all categories in which the husband's education was greater than his wife's, men had lower rates of all-cause and ischemic heart disease death than men with the same education as their wives; differences in ischemic heart disease rates were statistically significant ( $p < 0.05$ ). Among men less educated than their wives, death rates varied significantly by education of husband. Men with

TABLE 1  
*Distribution of spouse pairs aged 45-79 years by education of husband and wife*

Husband's education	Wife's education						Total	
	College graduate		High school graduate		Less than high school graduate			
	No.	%	No.	%	No.	%	No.	%
College graduate	296	17.4	478	28.2	14	0.8	788	46.4
High school graduate	108	6.4	604	35.6	60	3.5	772	45.5
Less than high school graduate	8	0.5	95	5.6	35	2.1	138	8.1
Total	412	24.3	1177	69.3	109	6.4	1698	100.0



TABLE 2  
Age-adjusted mortality rates among men aged 45-79 years by education and by education of wife

Husband's education	Wife's education												
	College graduate			High school graduate			Less than high school graduate			IHD			
	All causes	IHD*	All causes	All causes	IHD	All causes	All causes	IHD	All causes	IHD	All causes	IHD	
Rate	No. deaths	Rate	No. deaths	Rate	No. deaths	Rate	No. deaths	Rate	No. deaths	Rate	No. deaths	Rate	No. deaths
College graduate	0.202	59	0.084	24	0.193	86	0.063	28	0.061	2	0.030	1	
High school graduate	0.265	30	0.105	12	0.234	132	0.094	53	0.169	13	0.044	3	
Less than high school graduate	0.023	1	0.000	0	0.171	25	0.057	10	0.224	13	0.073	4	
Total	0.210	90	0.084	36	0.214	243	0.081	91	0.190	28	0.061	8	

\* IHD, ischemic heart disease.

a high school education married to women with a college education had the highest age-adjusted all-cause and ischemic heart disease mortality rates of any group. These men had a relative mortality risk of 1.4 ( $p < 0.05$ ) for all causes and 1.8 ( $p = 0.06$ ) for ischemic heart disease compared with men with wives less educated. Men with less than a high school education married to women with a higher educational status had very low death rates from ischemic heart disease.

As seen in table 3, men married to more educated women were significantly older, had a lower social class index (based on occupation of head of household), and higher levels of systolic blood pressure, but did not differ significantly with regard to cholesterol, obesity, or cigarette smoking. In addition, although men with less education than their wives were older, they had marriages of equal or shorter duration. Adjusted relative ischemic heart disease mortality risks estimated from Cox's proportional hazards model for categories of educational discordance are presented in table 4. Each educationally discordant group of men had risks greater than 1 when compared with men more educated than their wives, and again the highest risk was seen in high school graduates married to college-educated women (relative risk = 1.9,  $p < 0.05$ ). All relative risks of educational discordance were reduced but still greater than 1 when all covariates were included in the model.

#### DISCUSSION

In this community, in which 85 per cent of the study population belonged to the top three social classes, according to the Hollingshead index based on the occupation of head of household, having a college-educated wife significantly predicted ischemic heart disease mortality in less educated men. These results are consistent with most previous studies showing educational discrepancy to be a signif-



TABLE 3  
Characteristics of men aged 45-79 years by spouse differences in education

Educational status of husband relative to wife	No.	Age		Wife's age		Years of marriage		Cholesterol		Systolic blood pressure		Obesity index		Social class		Cigarette smoking	
		Mean (SD)†	(SD)	Mean (SD)	(SD)	Mean (SD)	(SD)	Mean (SD)	(SD)	Mean (SD)	(SD)	Mean (SD)	(SD)	% lower	% current		
More education	552	63.7 (8.5)	(8.5)	60.4 (9.5)	(9.5)	32.2 (12.6)	(12.6)	212.6 (34.3)	(34.3)	140.4 (21.7)	(21.7)	3.65 (0.41)	(0.41)	3.1	3.1	21.0	21.0
Equal education	935	64.1 (8.2)	(8.2)	61.0 (8.7)	(8.7)	32.2 (12.7)	(12.7)	213.5 (35.5)	(35.5)	140.7 (22.7)	(22.7)	3.66 (0.41)	(0.41)	8.8*	8.8*	19.6	19.6
Less education																	
Husband																	
High school	108	65.3* (8.1)	(8.1)	62.0* (8.5)	(8.5)	29.7* (13.3)	(13.3)	209.9 (32.9)	(32.9)	144.7* (24.6)	(24.6)	3.64 (0.46)	(0.46)	8.3*	8.3*	19.4	19.4
College	95	68.7* (6.6)	(6.6)	64.8* (7.8)	(7.8)	33.3 (15.0)	(15.0)	207.8 (31.6)	(31.6)	145.4* (19.6)	(19.6)	3.62 (0.41)	(0.41)	24.2*	24.2*	20.0	20.0
<High school	8	72.9* (5.4)	(5.4)	66.3* (9.6)	(9.6)	24.8 (18.5)	(18.5)	203.2 (28.2)	(28.2)	159.6* (31.4)	(31.4)	3.68 (0.43)	(0.43)	50.0*	50.0*	0.0	0.0

\* Significantly different from husbands with more education than their wives at  $p < 0.05$ .  
† SD, standard deviation.

cant predictor of coronary heart disease. In a 1966 case-control study of 35 patients with previous myocardial infarction or anginal pain and a positive exercise test, more cases than controls were less educated than their wives (2). In a 1969 study of 1472 Chicago Western Electric employees, men with educational status less than their wives had a significantly increased risk (relative risk = 1.6,  $p < 0.05$ ) of coronary heart disease, defined as angina pectoris, myocardial infarction, or coronary death (3). The Framingham Study, which also included angina as an endpoint, showed a relative risk of 2.6 for men married to women with 13 or more years of education compared with men married to women with a grammar school education (1). Only among Israeli male government employees, was educational incongruity unassociated with the five-year incidence of angina or myocardial infarction (4, 5).

Horan and Gray (8) have criticized previous studies of status inconsistency and coronary heart disease, suggesting that the reported association is an artifact of status and heart disease. Shekelle (9) later challenged this report. In this population, socioeconomic status was high, although significantly lower for less educated men with more educated wives. Adjusting for socioeconomic status, however, did not remove the observed relationship. Furthermore, there were no significant differences in ischemic heart disease death rates by husband's educational status; significant risks were observed only when both educational status of husband and educational discordance were taken into account. Moreover, the greatest excess risk occurred in the most discordant pairs, in men with a high school education married to college-educated women. A smaller and nonsignificant excess in ischemic heart disease death was seen in men with less than a high school education married to high school graduates. There were only eight

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TABLE 4  
Adjusted ischemic heart disease mortality risk† of spouse discordance in education among men aged 45–79 years based on Cox's proportional hazards model

Educational status	Adjusted for age		Adjusted for all covariates‡	
	Relative risk	95% confidence limits	Relative risk	95% confidence limits
Husband equal to wife	1.52*	1.1, 2.1	1.41	1.0, 2.0
Husband less than wife	1.52	1.0, 2.4	1.42	0.9, 2.3
Husband high school, wife college	1.88*	1.1, 3.3	1.76	1.0, 3.2
Husband <high school, wife high school	1.40	0.8, 2.6	1.27	0.7, 2.5

† Compared with men with more education than their wives.

‡ Includes age, cholesterol, blood pressure, cigarette smoking, duration of marriage, and social class.

\*  $p < 0.05$ .

spouse pairs in which men had less than a high school diploma and the wife had a college degree; no ischemic heart disease deaths occurred in this small sample.

The predictability of educational discordance for ischemic heart disease death in this population was weaker when the wife's educational status was based on a high school diploma, as was done in Framingham, rather than a college degree. The Framingham Study also noted the importance of the wife's occupation as a predictive variable related to the wife's education (1). Unfortunately, no information was available on the wife's occupation in our cohort. Considering the age of this population, one can suppose that the majority of women probably had not worked outside the home after marriage and were not so employed at the time of the baseline examination.

In a 1976 review of studies of social incongruity in both men and women as measured by education, occupation, income or religion, and coronary heart disease, Jenkins (10) suggested that the excess risk of status incongruity is mediated through stress, chronic tension, and anxiety. Other explanations are possible: couples in which the wife is more educated may have a different lifestyle, e.g., diet or

alcohol consumption, particularly if the wife works outside the home. Alternately, men who marry more educated women may be of a personality type more prone to coronary disease. Whatever the mechanism, the data reported here add further support to the hypothesis that status incongruity is an index of some social process that increases the risk of coronary disease. In view of the remarkable recent United States changes in spouse expectations and behaviors with regard to what is "women's work" and increasing crossover for traditional roles, it will be interesting to see whether educational discordance will predict ischemic heart disease in future generations.

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