Ritings and Wramblings

This is a collection of some bits and pieces I have written over the years. I wrote some of them while I was doing my fellowship in Canada, and I printed them out with the title ‘A Ration of Rationale for an Irrational World’; this was a tongue in cheek tribute to my bosses at Sunnybrook Hospital in Toronto, the Authors of ‘The Rational of Operative Fracture Care’, Joe Schatzker and Marvin Tile.

I have added a few other pieces written since then, and the collection is a pretty rambling miscellany. If I had time to write regularly, I suppose I would become yet another blogger, but I have too many other pressures on my time to allow me to indulge myself with much writing at present.

If anyone likes any of the pieces that follow, or is provoked or stimulated by any of them, feel free to respond.

Steve Krikler September 2007

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Oh to be bald

Surely, only a louse should be in favour of hair. As someone who has a reasonable head of hair, I sometimes look forward to going bald. It's not because I think it would suit me, or make me somehow more attractive or distinguished. Mind you, Yul Brenner and Telly Savalas did alright, and even some professors of O & G seem to have coped, provided they can distract you with a bow tie. No, it's just such a nuisance having to make sure it is neat and tidy, and having to be aware of the currently correct style. Every couple of months I suddenly realise it's got too long again, and I start the rigmarole of getting a haircut. All the barbers, sorry hairdressers, seem to have working hours which are a subset of my working hours, and it seems to take another month before I get well enough organised to make it to an appointment. Then I face the next problem. 'How would you like it sir?' I am asked, as though it makes any difference. I still come out looking the same each time, and I know I am going to itch for days to come. Baldies don't have any of these hassles, they just need the occasional polish, and all is fine. The more obsessional hairies, the daily shampoo and conditioner set, must waste hours and kilowatt hours on hot water and hot air. All for some dead keratin. If we all went bald, it would become quite normal, and only hairdressers, headlice and trichologists would complain. The pharmacological industry would have mixed feelings; anyone developing a wonder cure for baldness would be miffed, but it would be one less side effect on the list for cytotoxics.

Knowing my luck, I probably will go bald, but not until the hole in the ozone layer has reached these latitudes, so I shall have to start wearing a sun hat when I go out in summer. And a warm hat in winter. And a night-cap if we turn the heating off at night. Perhaps it was a lousy idea after all.

Feed a Temperature ...

It seems to be a reliable principle that each biological response has evolved because it is beneficial to the individual. In many cases, we can see and understand how this response is beneficial, for example tachycardia and oliguria following haemorrhage helps maintain tissue perfusion. When we understand the mechanism, we can direct treatment to the cause, and avoid treating the response inappropriately. No one would advocate treating hypovolaemia with beta blockers and diuretics, although this would reduce the tachycardia and increase the urine output. Fluid replacement is a far more rational approach.

In the case of symbiotic systems, the responses will be beneficial to the whole system, even if it is not immediately beneficial to the individual. However, in the case of infection, the alteration in homeostasis may have evolved to help the host or the invader (and monitoring the response may show which side is winning the battle).

Pyrexia is a fairly universal response to infection. Is this because it has evolved as a protective mechanism for the host, or is it merely that most pathogens raise the host temperature for their own benefit? Indeed, is the ability to cause pyrexia almost a requirement for pathogenicity? This seems to me unlikely, bearing in mind the huge diversity of organisms capable of causing pyrexia. Also, pyrexia is a response to insults other than infection, so there appears to be an innate pyrexia response. If this is true, then it follows that the overall effect of pyrexia is in some way beneficial to the host, and it is therefore an inappropriate medical response to try to reduce the temperature. Certainly, cooling a shivering patient will just add to their metabolic burden of raising their temperature, but may achieve little else. Indeed, it may be more helpful to encourage the rise in temperature. Does aspirin treat the symptom at the expense of the overall ability to respond to infection? Has this ever been studied clinically? How do the various components of the immune system respond at differing temperatures? At the very least, the old adage 'Feed a temperature, starve a cold' may be correct. Now, about anorexia and coryza ...

A Good Death - By Suicide

Surely, one of the saddest group are the patients who have made serious suicide attempts and failed. I am not talking about the teenage parasuicide who takes ten aspirin, then presents to the A & E dept. I am talking of the older patients who take a real overdose and do not tell anyone, but are discovered before death, but with permanent brain damage, or the 'jumpers' who survive with major limb injuries or spinal cord injuries. One of the stronger arguments in favour of legalised abortion is memories of failed back street abortions. Is not the plight of the failed suicide similar?

I was recently involved in the care of a middle aged man with diabetes and peripheral vascular disease who, after several weeks of discussion with his family, decided to end it all. He jumped 30 feet from a bridge onto a motorway. He did not die, but sustained an open pelvic fracture for which he has had a colostomy, as well as a burst fracture of L3 and bilateral calcaneal fractures, one of which was open. This foot became infected, and he has now had a below knee amputation. Who are we to judge his quality of life prior to his jump? Maybe he is right, maybe he would be better off dead than a diabetic amputee, but he has certainly not improved the quality of his remaining life now.

Is it not time that we, as a profession and as a society faced up to these issues? We have the technology to make death available with certainty and without further suffering. Jack Kevorkian, an ex-doctor as far as registration is concerned, is on trial in Michigan for doing just this. Is he out of line or just ahead of his time? Why do we have this preoccupation against a dignified death? Is suffering at the time of death some sort of necessary process? Is it divinely destined? So was pain in childbirth, until Queen Victoria undermined the moral high ground of the anti-analgesic brigade.

The only certain thing in life is death. When we read of doctors saving a life, they are in reality only deferring death. If we accept the right to use modern medical technology to interfere with the timing of death, and to improve the quality of life, surely it is valid to use the same technology to help decrease the suffering at the end. And if a patient chooses to die, why should we withhold our technological skills and knowledge, if the result is a failed attempt and further suffering?

Time for a New Journal?

Eagerly, I tear open the letter with the journal's frank mark. Another rejection. This is ridiculous, when I see the irrelevant case reports others seem to get published, why won't that nasty editor take one of mine? I got one published on the first reported association of osteonecrosis and diaphyseal aclasia, even if both conditions are fairly common, their association in this patient was probably coincidental, and anyway, it was of absolutely no clinical relevance.

I think the time has come for a new journal, an honest journal, catering for the needs of today's struggling junior clinician coping with the demands of his 'publish or perish' academic environment. I am not sure whether to call it 'The Journal of Clinical Irrelevance', or the Journal of Trivial Irrelevance'. The former would guarantee to get some really good, long epidemiological papers, crammed with statistics which no one could understand, and which came to the conclusion either that 1) a common condition was probably quite common in a particular group, or 2) that a rare condition is quite rare, but could be diagnosed more often if we all kept a high index of suspicion. On the other hand, the inclusion of the word 'Clinical' would exclude the gems from the basic scientists. I once came across a paper entitled 'Sodium Concentration in Lake Trout and Rabbit Corneas'. I cannot remember the authors or the journal, but if they have any other similar studies which even that editor rejected, I have just the place for them.

I would have editorials discussing the benefits of drugs which have now been withdrawn from the market, a regular fascinoma section, and grand rounds in which cases are discussed where there are cock ups in the management which are all well described in current textbooks. For light relief, the materia non medica could be from managers discussing different makes of new office furniture, or tips on the design of new on call accommodation blocks by famous architects who have only ever done 5 star hotels or luxury maisonettes.

Ideally, to maximise citations, I should insist on a minimum of 12 authors for each piece, though I would be reluctant to make any struggling would-be academic feel excluded, just because he happens to be working with a bunch of morons who don't understand, say, the subtleties of his classification of eating disorders by faecal olfaction, for example. Mind you, there is always a risk that just such a paper might actually be useful, albeit irrelevant to almost all doctors in practice, so I might have to reject it from my journal, perhaps with a letter like this. 'Although your classification was rejected by your specialist journals as irrelevant, I am afraid it is too relevant for our journal. I must reluctantly inform you that you have fallen between two stools'.

Research is a Waste of Time

Or at least much of what is called research, is a waste of time. You disagree? In the words of Basil Fawlty, let me explain. But first, let me offer some credentials. I have a PhD, I enjoy research, and I want my career to include research.

It seems to be widely accepted without question that "research is important"; how often have you heard, or even made a comment like "he's OK, but he hasn't published much"? Is this a tenable position? Why is the number of publications on your CV any reflection on your ability to do the job, if, as most hospital staff eventually do, you are applying for a 'bread-and-butter' DGH clinical job.

What do I mean by research. To me, research is either asking a question and trying to find the answer (or an answer, or some answers), or it is defining a problem and trying to find a solution(s). The important points are the initial question or problem, and the attempt rather than the successful answering or solving. If that attempt was a valiant one, it may be worth broadcasting even if it was unsuccessful. Research is vital if we are to continue furthering our knowledge, but how many publications are really a furthering of knowledge? I do not count a review of the last 20 of the boss's favourite operation as research, however many publications it may spawn. If the results are different from those described in the literature for the same procedure, or if it is a unique operation, it may be worth telling the world, but how many uncontrolled retrospective reviews are clinically helpful?.

Research is often said to be an important part of training. "It promotes critical evaluation skills, teaches trainees to make a critical review of the literature, and to present their ideas clearly and concisely. It gives an understanding of laboratory methods. It teaches you to overcome problems." Let's look at each of these arguments.

Writing rubbish may be helpful in recognising other people's rubbish, but a properly run journal club seems preferable. The chairman's job is to appraise the critical discussion of the papers presented; if s/he does this well, a far deeper understanding of the problems and pitfalls of research will be obtained, and with this a more mature, sceptical interpretation of 'advances'.

Many papers published contain a very limited literature review. Indeed, I sometimes wonder whether a review of the literature prior to the conducting of the study might have resulted in its termination shortly after conception, instead of a long and painful gestation leading to the labour of eventual publication, only to be doomed to a meaningless, unread existence.

How many papers published demonstrate a clear train of reasoning? Having to present a lecture on a subject to one's peers and trainers, supported by the literature, is a much more demanding and rewarding exercise, both in terms of the learning experience, and as a directly supervised way of learning to make a critical review of the literature, to say nothing of the benefit to the peers.

In what way does a detailed knowledge of, for example, laboratory methods for the assay of gut peptides, help an NHS general surgeon' in his or her practice? By the

time s/he has become a consultant, the methods will have changed since s/he last set foot in the lab anyway. The important clinical skill is the interpretation of the results of investigations, not the details of their performance.

As for problem solving, sitting in on any division/directorate meetings is very enlightening. So is regular clinical practice. So, for that matter, is surviving the current career ladder.

All this emphasis on publication wastes time, wastes valuable research resources, demoralises the middle grade doctors who see it as yet another hoop through which they must jump, and ends up clogging the system with so much spurious writing that when I do a literature search, I sometimes feel I am struggling to see the wood for the trees.

Surely, in pushing forward the frontiers of our knowledge, one of the most important abilities is asking the right questions, another is being prepared to wait until clear answers can be found. Is it not better to publish a single, larger paper giving a definitive answer, rather than a series of related publications giving the same information, but in instalments. So why do people have a fixation on the maximum number of publications? This is a particularly tendency among 'academics', and particularly when they form that critical mass known as an 'interview committee', often a very critical mass. Is it because they are part of a system which counts lines on a CV, or if being more discerning counts the number of pages published, and multiplies by a factor for the prestige of the journal? A system which they survived, and are now dedicated to preserving? Or is it because they are too unimaginative to find a better way of judging how trainees have spent their time during their long years as 'juniors'?

How could the situation be improved?

By ensuring that all trainees regularly present and criticise papers at journal club meetings, and are constructively appraised in their criticism of the paper.

By ensuring that all trainees present regular review-type talks to their postgraduate training programme, with a written handout, covering a topic.

By ensuring that candidates for jobs in which there is no commitment to further clinical research are not penalised for their lack of publications.

Where research is included in the job description, one suggestion, and it is not original, is to limit the number of publications on an applicant's CV to, say, five. Very few trainees will have had five separate, worthwhile ideas which they have managed to see through to publication. By limiting each candidate to their five best papers, a diligent committee should be able to assess properly the quality of their output. As far as publication lists are concerned, it's not the size of your CV that counts, it's what you do with it.

Please don't get me wrong. Research is vital for the advancement of medicine, and I am all for encouraging anyone who is interested to get involved, but the motivation must be interest and enthusiasm, not the requirement to clock up enough lines on a CV in order to climb the next rung of the career ladder. There are consultants who

managed to get their job without a single publication, before 'research' (i.e. publication score) was deemed so important. To anyone dedicated to committing (or condemning) all trainees to research, I challenge you to provide clear evidence that clinical performance has any correlation with previous publication score.

A Plea for the Humeral Hood

The title 'rotator cuff' must be one of the poorest pieces of nomenclature in the musculoskeletal system, and as a medical student it caused me some confusion. Judging by the undergraduates I now teach, I was not alone.

The term has gained widespread acceptance, so how do I justify its condemnation? I do so because neither word is accurate; it bears little resemblance to the cuff with which we are all familiar, the piece of clothing at the wrist, and its primary function is not rotation. This is not to deny its importance as a rotator, but the presenting complaint of patients with complete tears is not an inability to rotate. I can only assume the name has stuck because, until now, no one has suggested a better alternative.

Anatomical structures are often named for their function; this is particularly common where there is a clear, simple function, such as in forearm muscles like flexor carpi radialis. Many structures are not, however, named by function, but merely by position or form, for example the anterior cruciate ligament could be named for its stabilising function (restrictor tibiae anterior) or protective function (custodies menisci medialis). The medial malleolar ligament is triangular, so it is called the deltoid ligament; no mention of function there. Muscles may be named for their function, but there is a two-headed and a three headed muscle in both the upper and lower limbs, and this is the feature for which these muscles are named, admittedly with the descriptors 'femoris' and 'surae' in the lower limb. So the shape and location are accepted features for the creation of a name.

The functions of the rotator cuff are too complex to be described in a suitably brief title. Rather than trying to sum them all up in one title, why not follow the digital volar plate, the tendo achilles or the iliotibial tract, and choose a name based on appearance and location?

As I explained initially the rotator cuff is not cuff-shaped, a more descriptive term for its shape is 'hood'. There are one or two other hoods described by anatomists, so a locating descriptor is also necessary, and I therefore plead for the adoption of the term 'humeral hood'. This is succinct, descriptive and has the further comfort of alliteration. Let's hear it for the humeral hood.

This appeared in the Journal of Elbow and Shoulder Surgery in 1994

There's no smoke without fire.

How many times have you thought this when reading about doctors being ‘suspended pending investigation’? Did you, like me, wonder whether they had been ‘asking for it for a while’, whether they were troublemakers? Now that I have been ‘suspended pending investigation’ I know this not to be true.

During an audit meeting, it became clear that it was almost impossible to extract clinical information about a particular patient from the chaotic folders stuffed with loose pieces of paper in apparently random order. The only point in storing information is to allow its later retrieval. I decided to ease the retrieval of the information by sorting out the notes. In the process of placing the loose pieces of paper into a logical order, there were several pieces that were of no clinical or legal value. I thus ended with a single, neat pile of papers on the desk, and a small pile on the floor. I could now comfortably accommodate the pile on the desk in one folder, and the remainder in the rubbish bin.

I would like to digress here to correct a popular misconception. Hospital notes are not a ‘legal document’. There is no such thing as a ‘legal document’, except, perhaps, a document cited in a legal action. Outside psychiatric or obstetric practice, there is no statutory requirement to keep any records. Of course, should an allegation of negligence be made, without good contemporaneous records it may be impossible to defend, so it is in our own interests to keep all relevant records at least until the time limit for initiating legal proceedings has expired. In addition, it may be useful for future clinicians or researchers to have access to old clinical records. However, the lack of any future value of many of the pieces of paper which tend to find their way into the hospital notes should be obvious to anyone with a little experience and common sense. Which brings me back to my present predicament.

Having finished our meeting, we started our ward round. Meanwhile, the contents of the rubbish bin were discovered by the deputy hospital administrator, a person whose cerebral capacity makes him eminently suitable to fill the role of Christopher Robin's companion. He stormed onto the ward, brandishing the contents of the rubbish bin, and demanded an explanation. I informed him that I had discarded the papers as they were of no clinical importance, at which he strode away with the riposte "your consultant will hear of this". Two hours later, as I was visiting my patients for my afternoon operating list in another hospital, I was summoned back to the chief administrator's office. With no attempt made to discuss the issues, I was suspended from all clinical duties with immediate effect, and for an indefinite period. I was not to set foot on the premises without the specific written permission of the administrator. There was never any suggestion of any risk to a patient. There was no questioning of my clinical skills or judgement.

I was left in limbo. Yes, I could spend more time with my family, but in practice this meant spending more time being short tempered with my family. Yes, I could try and get some research done, but as I had no timetable of events, it was difficult to plan. And, barred from hospital premises, I could not review patients or their notes!

After more than four weeks, I was called to an informal meeting with the deputy regional medical officer, following which I was told there were no grounds for disciplinary proceedings, and I was reinstated.

The management line is that suspension on full pay 'is not a punishment, merely a measure to allow them to 'take the heat out of the situation', and to allow them to examine the facts.' I disagree on three points.

1. It may not officially be a punishment, but it is punitive to be abruptly pulled away from an operating list for an indefinite period without any attempt to discuss or clarify the issues.
2. I am a trainee. My job has a training element as well as a service element. Suspension interrupts the service element (their loss) but also the training element (my loss).
3. I am now known locally as someone who has been suspended, so my reputation may have been tarnished. This is important as, like most juniors, I am looking for a job on the next rung of the ladder.

In addition, in this particular case, the only 'heat' in the situation was injected by the deputy administrator. Why was he not suspended too?

As a professional with 11 years full registration and 14 letters after my name, I feel the events could have been handled with less personal upset to me and less disruption of clinical services. If my judgement as to the value of the notes was in error, could we not have resolved the problem by discussion?

There may be no smoke without fire. Just make sure you haven't an arsonist for an administrator.

It is now a few months since the events depicted took place. I have had no apology, only a brief response to a written request from me for written confirmation that I had committed no misdeed, and had had no disciplinary action of any sort against me. To my certain knowledge, I was the fourth member of staff to be suspended by that administration in 1992. There have been no disciplinary proceedings, and none are pending. The others were a consultant, a senior ward sister and a houseman. I believe that they also tried to suspend a porter, but when faced with a threat of an immediate strike, they backed down.

As a trainee, I think I have grounds for grievance, certainly morally, but perhaps also in an industrial relations tribunal. Everyone has advised me to let it lie, to keep my head below the parapet. I might win the battle, but lose the war. I am ashamed to admit that I am presently planning no more than this anonymous article. Who's next for suspension? I am sorry I didn't act to protect you.

This article originally appeared in a watered-down version in the BMJ in 1993

Minimising the Surgical Insult

'Wounds heal side to side'. This platitude is sometimes stated by butcher surgeons who see operations in three stages. The second stage is the actual operation; whipping out a stomach, replumbing an artery, banging in a hip. The first stage is getting through all the barriers in their way to the interesting, second stage. The third stage is closing up again, a tedious routine which is often delegated to any convenient 'trainee'.

With this philosophy as a basis, why not make a nice, big hole to get a huge view and great access to whatever it is you are trying to fiddle with? But pause a while, and remember that the incision will kill cells along its length, traumatise tissues along its length, and will divide vessels along its length. Is the entire length of that nice, big hole necessary?. 'Why struggle through a little keyhole?'. Because, once you have thought about the damage you are inflicting on your patient, once you have realised the rationale of minimising tissue trauma, it need not be a struggle. Yes, it takes a while to get used to a different view, and it may require a little adaptation of techniques. When cholecystectomies were all done 'open', surgeons were used to seeing the gall bladder and liver in their entirety at once. Now that most are done as 'lap choleys', surgeons are used to seeing the whole picture, but in pieces. Knee surgeons went through the same process years ago, changing from seeing the whole meniscus to seeing it a little at a time.

Ideally, the incision should be perfectly positioned and the right length first time. But if it is a little short to start with, it can always be enlarged a little in the right direction. There is nothing wrong with doing this. With practise, it is possible to get it right first time in most cases. Initially, it may be easier to make a larger incision. As experience with an operation grows, the limiting factors start to become apparent. For example, through a 2 cm incision it is possible to find the ascending colon. Using two Babcock tissue forceps, it is possible to work gently down to the caecum. By following the taenia, it is possible to deliver an inflamed appendix, provided it is not adherent. If the appendix and its base are delivered, the appendicectomy can be performed outside the abdomen. The limitation to shortening this wound is the danger of strangulating the caecum, which is clearly not a good thing, and also makes it difficult to return it to the abdomen at the end.

Of course, there will always be some operations which require a major incision, and if the view or access are inadequate, a small incision may be dangerous. My point is not that all incisions should be small, but that all incisions should be no longer than necessary, and that with a little care, many incisions could be shorter without causing any problem.

Wounds may heal from side to side. But like many mindless platitudinous clichés, this phrase ignores the facts that they hurt end to end, the tissue is traumatised end to end, and the wound is prone to infection from end to end.

People or Groups?

People are people. They are also social animals, so people tend to want to belong to groups. Indeed, people who don't feel they belong to any group may be seriously disadvantaged, and may create major problems for society.

The word 'group' may be applied at various levels and on different scales, so you may belong to your family group, your nationality, your ethnic or religious group, or to social or sporting clubs. All of these groups may confer an identity and some security on their members, which sounds beneficial, and may be accompanied by a sense of loyalty. This may be harmless, but there is a risk that the loyalty to your own group may engender a feeling of superiority or even hostility to members of other groups. At its most extreme, this reaction leads to the ability to hate and perhaps kill the others.

The groups may be Protestants against Catholics in Northern Ireland, Jews against Arabs, Serbs against Croats, or even men against women, as happened in Montreal four years ago when a young man shot 13 women engineering students, solely because they were women engineers.

A vital prerequisite for any of the killing in these circumstances is the ability to hate others, purely because they belong to another group. And yet, like the Montagues and the Capulets, when an individual meets an individual from the other group, they may be amazed to discover that they really are human. A modern version of this has happened to Egyptians, who were taught in school that all Israelis were evil, but now find themselves as trading partners, and dealing with fellow human beings. A sniper can surely only shoot children queuing for water if he can see them as the enemy. If only he could see that people are people.

A New Law of Specialties

Have you ever noticed that some specialties are famed for thinking, while others are famed for doing? The most celebrated technical thinkers are probably the neurologists. The good, old fashioned, clinician could, merely by taking a history and performing a thorough clinical examination, tell exactly where in the inner capsule the infarct lay. He could not do anything about it, but it took great knowledge and thought to arrive at the correct answer; a bit like doing the Times crossword.

At the other extreme, I, a mere orthoplod, am reputed to be as strong as an ox and twice as intelligent. If it's busted, we'll fix it. We must be the most equipment intensive specialty, but serebr... cerreb... ceri... thinking? Forget it. General surgeons are also doers, but not quite such good carpenters, and they have to understand a bit about fluid balance and normal amylase values. Physicians, who we like to think of as doctors who decide whether to do nothing today or tomorrow, are even cleverer than general surgeons, but more practical than neurologists. They point out how many syndromes they know, but they do at least stick a few tubes into various places.

Of course, we all know this anecdotally, but this is a scientific journal, so the time has come to formulate all the above formally. I propose the following hypothesis; $C \times P = K$, where C = the degree of cerebration, and P = the level of practicality, and K = Krikler's constant. I am not sure whether this only applies to clinical hospital specialties, or whether it can be used in other circumstances. I never understand what epidemiologists or clinical geneticist write, but I don't know that they actually do very much either, so the law seems fine there.

GPs? My GP parent and grandparent both seemed reasonably cerebrate and practical, at least as far as any close relative can judge. The only major reservation I have is with the dermatologists. Drying the wet ones and wetting the dry ones doesn't exactly count for doing very much, so I guess it must be the requirement for fluency in Latin which adds to their C value. Or perhaps the formula just doesn't fit, in which case, I am sure I could force it to fit with a hammer.

Size Isn't Everything

If I were a fairy godmother with a magic wand, or if I were secretary of state for health, which surely amounts to the same thing, I would decree that all new hospitals are built to a new design. The problem with most of the current ones, apart from the fact that in many the buildings were first current during the reign of Queen Victoria, is one of size.

To be able to offer appropriate backup and services to each specialty, any new hospital must be fairly large. This may satisfy the requirements of economists, CEPOD, the junior doctors hours and the MDU, but it doesn't usually satisfy the patients and clinical staff so well. If you ask staff who have worked at a small institution, they will almost always say they preferred it, because it was so small and friendly. Individuals could remain just that, everyone knew everyone. And from the patient's perspective it seemed better, because it was less intimidating, and staff morale was often better. The Patient's Charter may not exactly say that staff morale must be good, but happy, friendly and polite staff would certainly produce fewer complaints from the patients. On the other hand, if a patient develops a complication, it is nice to have the other specialties readily available, complete with such services as an ICU or CCU.

So the problem is how to make a hospital both big and small at the same time. There does already exist a model which solves this dilemma; many district general hospitals have a maternity unit which is housed in a separate building. It has its own staff, its own theatres and so on. Why not use this as a model for the entire hospital. I think of the layout as a cartwheel, with core services in a small hub, and other clinical units being in satellite buildings, connected by the spokes, underground passages as well as surface paths. The trauma service would probably need to be in the hub as it is so multidisciplinary, but most elective surgical specialties, maternity, paediatrics, cardiac and neurosciences could all be housed in their own facility, complete with their own appropriate diagnostic and imaging departments. As far as possible, each unit would be independent, complete with its own administration. There should be a dining room in each, and it should be easy to identify the staff from each unit, perhaps with different uniforms, so as to encourage the features which made small hospitals work so well. I don't know the maximum size which is still small enough to remain personal, nor the minimum size which is large enough to remain viable, but the units too small on their own could be paired; ophthalmology with ENT, for example.

By having a small, dedicated unit, with its own, clear self image, the benefits of small hospitals would be maintained, but by connecting them on one site, the core services remain accessible to all, which should give our patients the best of both worlds.

Time OUT

"There. Your Colles' fracture has been perfectly reduced, and it should do fine in that cast"

"How long will I have to keep it in plaster?"

"Oh, about six weeks"

"Why?"

"Um ..."

Allow me to let you in on a little trade secret. The reason plaster casts are kept on for six weeks is not because anyone has done a double-blind prospective randomised controlled comparison of five or seven weeks, but because six weeks is one Orthopaedic Unit of Time (OUT). Fractures don't suddenly heal at any particular time. The healing process is a gradual one, but Watson-Jones' rule of thumb has stood the test of time as an arbitrary period of immobilisation; six weeks for the upper limb, double it for the lower limb, halve it in children. In other words, one OUT for a Colles' fracture, two OUTs for a tibial fracture. Spinal surgeons are so worried about litigation, if they immobilise at all, it is for a minimum of two OUTs. On the other hand, children heal faster, so they tend to only need a hemiOUT. Soft tissue injuries also get treated in OUTs. Many surgeons splint their flexor tendon repairs for an OUT, similarly Achilles tendon ruptures spend an OUT splinted. Of course, to be compatible with EEC directives, we should now be using milliOUTs. If no patient spends more than one milliOUT in the fracture clinic waiting area, it's either a well run service, or its reputation is so bad no one in their right mind would go near the place. Ten OUTs equals an innings, in other words the standard waiting list time for an elective orthopaedic operation.

Now that I have let the cat out of the orthopod's bag, will other specialties start to use it? Will OUTstanding be the post-op plan following haemorrhoidectomy? OUTrageous be the minimum time required for the diagnosis of psychosis? And we can now relax, and rename a standard six week plaster an OUTcast?

Made it, at last.

To travel hopefully is better than to arrive. I've been travelling up the career ladder of medicine for 15 years, albeit with the odd detour thrown in, but at last I've arrived at the top rung. I'm sure plenty has been written on becoming a consultant, but I guess I've been so busy trying to get there, I never really worried about what it would be like when I finally arrived.

I've now been in post for four months, long enough to have recovered from the initial shock, but still fresh enough for the novelty not to have worn off. How does it feel?

Just in terms of the clinical work, as a junior doctor, I was used to taking decisions and being responsible for my mistakes, but there was always the feeling that the boss was there to turn to if I needed help or advice. Well, in theory, at least, though I am well aware how lucky I was when I consider the support some of my colleagues received from their bosses. Now, as the boss, I am doing much the same clinical work as I had been doing previously, but without that feeling of backup. It is like a trapeze artist doing a manoeuvre he has practised many times, but suddenly without the safety net. I notice that when I get home, although I may not have done more operating or seen more patients in clinic than before, I am much more tired than I used to be.

Then there is the non clinical work. Taking up a consultant post is another version of the blank slate. How to organise my practice? How to timetable my sessions, fixed and non-fixed? How many patients to see in a clinic? What categories, routine, urgent, by subspecialty? What to get typed, what to write; ward rounds, operation notes? How to organise operative waiting lists. Dealing with GP letters, drug reps, implant manufacturers. What instruments I require for which operation, what instruments and implants I need, and how to overcome the continuing resistance of management to their provision? Which committees to accept, which to avoid? How not to get completely overwhelmed by the clinical workload, but to also consider the training aspects for my junior staff, teaching other staff, arrange research, contribute to the running of the department, interview incoming staff, write references for outgoing staff, and not to forget my own continuing educational requirements. All these are aspects of the job of which I was only dimly aware, but they all demand my attention now, seemingly continuously during any clinic, where I am also busy trying to see the problem patients myself, at the same time as making sure my registrar is seeing new patients under appropriate supervision and without infringing the rules of the ever present Patients' Charter.

To help me cope with this large and demanding blank slate, I do have one major advantage compared to my previous life as a junior; a secretary. When I phone my office from clinic to try to sort out the latest crisis, it is such a thrill to hear her answer "Mr Krikler's secretary" it is almost worth ringing off and dialling again just to hear her say it again. Secretaries are grossly undervalued in the NHS, you need only see the difference a competent secretary can make to the running of a firm. I have been very lucky with my secretary's ability to keep everything under control, including much of the non clinical side of my workload, so my time at my word processor can now be spent indulging myself with writing this article. I've also been

very lucky to have landed in a department where all my colleagues actually talk to each other, regularly and amicably, and they have all made me feel welcome.

May I indulge in an analogy? Imagine an eagle chick in the eyrie. It wanders around in its little space peering out into the open. It may open and close its wings from time to time; it has been watching its parents fly in and out, it knows the theory, but eventually it just has to launch itself into space. Almost to its surprise, it manages to fly. It starts to enjoy itself, the feeling of stretching its wings wide, of soaring and swooping. Don't look down, it's a long drop if you get it wrong, but it is a wonderful feeling when it goes right after being cooped up for so long before. Resist the temptation to be too adventurous too soon.

What is it like to become a consultant, an independent practitioner? In two words: exciting but also frightening. In one word: exhilarating. Long may it last.

Grandparents

My grandparents were in many ways two very different people, but they must have had much in common. Now, they have something else in common; they are no longer with us. And, strangely, my unscheduled return home now prompted by my grandfather's recent death seems to have produced something akin to an emotional deja vue.

I think it was in 1979 that my grandmother died. Her death was unexpected, although she had had heart problems for many years. I was still a student when I learned of her death from a phone call from my father. I have a strong memory of hurrying home on my moped, with tears intermittently trickling down my cheeks inside my helmet, and repeatedly saying to myself "I'll never see her again".

Now, as I sit here at 30,000 feet, alone among strangers, having ended the holiday with my wife and children two days early as a result of a midnight phone call from my father, I have flashbacks of my grandfather.

I see him as I saw him most recently, on his 93rd birthday, a shrunken, frail old man, not quite sans teeth, sans eyes, sans hearing, and certainly not sans faculties. I see him as I did when I was a small child; he was a wise, conscientious and caring doctor, for whom my respect was such that I forgave him the sting of the needle as he gave me my vaccinations. I see him at home in the house which housed his surgery, at home in the flat into which he moved after my grandmother's death, and at home in the room into which he finally moved when he was too frail to cope in his flat. I see his face, and tears start to form as I remind myself that I'll never see him again.

A Memorable Medical Man

As a medical student in a London teaching hospital, I had learned to mistrust GPs. Their diagnoses were often wrong, their knowledge was out of date, and they failed to examine their patients. But, against this background, there was one doctor I do remember. Already in his seventies, but still in full time practice, he was quietly proud to have been in the original group of doctors who had worked with the late Dr Michael Balint, and he had been practising holistic medicine long before the term had been invented. Yet, despite this, he had never seemed to have lost touch with physical and technological medicine. Whenever I met him, he would quiz me on recent advances in whatever specialty I was studying at the time. This was, perhaps, best illustrated by his question in 1978 when I was attached to the oncology unit. "Have you seen any patients treated with cisplatin?" I had only just heard of the drug myself. Nor were his clinical diagnostic skills any less impressive. A cousin of mine in his forties complained of acute backache, and was sent to hospital with a correctly diagnosed leaking abdominal aortic aneurysm. Another patient was sent up with a clinical diagnosis of favism; I, the up-to-date, informed student in the centre of excellence had to look up this condition having never heard of it. He was memorable for all these, but to me, he was memorable also because he was my grandfather, and at 93, he has just died.

Obituary

When Berthold Hermann began practising as a physician in Vienna in 1925, he had no intention of moving, but with the rise of the Nazi party, his freedom to practice became increasingly limited. As he had cured an SS officer of gonorrhoea with the then new sulphonamides, in 1938 he was given advanced warning of his impending arrest and was able to escape. With the help of an influential patient, he went to Albania, where he became well respected from his work in the hospital at Tirana. He soon numbered amongst his patients both the prime minister and the family of King Zog, and his fame was such that a letter once reached him addressed simply Dr Hermann, Albania.

His freedom of access to the royal family led to opponents of the king trying to persuade him to administer poison. He refused, then found himself under house arrest, only to be summoned urgently an hour later to treat the police chief's granddaughter. When the Italian army invaded Albania, he was invited to become the chief medical officer for the occupying army, provided he agreed to pretend to be Catholic. He refused, and decided it would be safer to move again.

One of his sisters had been killed by the Nazis, but his other sister and her husband, both doctors, had left Vienna in 1936 for Edinburgh. They had registered him as a student at Edinburgh, as a result of which he was able to obtain an entry visa to the UK. He arrived in August 1939, and was initially interned on the Isle of Man as an enemy alien. After four months he was released. He requalified in Edinburgh, and was sent to work in the hospital in Dumfries.

After the war, while awaiting British citizenship, he joined UNRRA (the United Nations Relief and Rehabilitation Agency) and, being German speaking, was sent to Germany. Although he was officially working in camps and hospitals for Displaced Persons (DPs), he found it impossible not to treat the local population as well. On one occasion, he had two children with meningitis, one a DP, the other local. He was only given penicillin for the DP, and threatened to resign unless he was given penicillin for the local child as well. He was, and both recovered.

After 18 months, he returned to the UK, where he established a general practice in London, in partnership with the late Dr Bill Munro, whom he had met in Scotland. He ran the practice from 1948 until his retirement in 1986 at the age of 84; for the last 26 years, his surgery premises adjoined his house, allowing him to be continuously accessible to his patients, something not always appreciated by his family. One of his daughters followed him into medicine and joined him as a partner until her early death from cancer at 39.

He was a thorough and conscientious clinician at dealing with physical ailments, but he was also an early believer in the importance of the psychological aspects of illness, and was one of the original group of doctors to work with Balint.

After his retirement, despite deteriorating eyesight, hearing and mobility, he maintained a keen interest in medicine, and the activities of his family, friends and former colleagues until his final illness. He is survived by his second daughter, a

psychotherapist, ten step grandchildren and grandchildren, one of whom (me) is a surgeon, and three great grandchildren.

Dr Berthold Hermann, born 5.2.1902 Bukovina, Rumania, died of pneumonia 10.4.1995 aged 93. Qualified in Vienna 1925, requalified in Edinburgh 1941. General practitioner in Finchley from 1948 to 1986.

This obituary appeared in the British Medical Journal in 1995, and was rewritten for the Journal of the Balint Society in 1996

A Wet and Windy Week with Wade

"Fancy coming sailing" asked Peter Wade, in a nonchalant sort of way last spring. I explained to him that the sum total of my sailing experience was an afternoon in a dinghy at the Welsh Harp when I was a student, which is over 15 years ago. "Don't worry, he said, in a reassuring sort of way, "she's in the Med. It's always calm and sunny there".

I'm always open to new experiences, so, to be honest, it did not take much more persuasion and I found myself with John and Andrew at Gatwick airport at 0500 hours on the last Sunday in August, waiting to catch the flight to Corsica. John and I had driven down together in the small hours. Once at the airport, we refreshed ourselves with coffee and Danish pastries, before getting some duty free, a bottle of gin and a bottle of Pimms. We met up with Andrew at the airport. He was looking a little jaded, having spent the night on a bench at the airport. I later discovered he had also bought a bottle of Pimms; but then, it would be a disaster to run out of such on board essentials. John was an experienced sailor and had his yacht master's ticket. Most of his previous sailing had been in dinghies or in and around the English Channel in chartered yachts. Andrew, despite being Peter's younger brother and the boat being the family boat for the last 17 years, was not an experienced sailor.

The flight was uneventful and Peter met us at Figari airport in a hired Renault Clio. We drove for a little over an hour to get to some friends of his for lunch. After a relaxing lunch, during which I performed some silly magic tricks for their 5 year old son, we drove for four or five hours up to the North of the island where the boat is moored. We drove up over quite high mountains and down again to the coast at Bastia. The road down from the mountains was very winding, with spectacular views, a little reminiscent of driving in the Massif Centrale. At one point we had to stop as Andrew was feeling car sick. After throwing up, he felt a little better and we were able to continue. Was this a sign of things to come?

On the Thursday morning before I set out, Peter had phoned me on his mobile phone from off the coast of Corsica to say that the engine had broken down. He gave me a list of the problems, so I spent Friday phoning around ordering parts to be delivered on Saturday morning. We settled all the luggage on board, then Peter and I set about repairing the motor. We took off the old, leaking water pump. I think it had been leaking for a while as the lower bolts were quite rusty, which made their removal a little bit more challenging. Undo the pulley bolts, slacken the alternator, remove the fan belt, remove the pulley (with big iron bar as it had become corroded on), remove some of the hoses, undo the water pump bolts (including the two rusted on ones, using a slightly too-small socket hammered on), fit new pump with new gasket, attach pulley, fit fan belt, tighten it with alternator, refit hoses, fill fresh water cooling system. Easy-peasy. Now for the melted fuel lines from when the engine overheated. Change the main injector feed line, change the bleed-off line complete with five banjo bolts and their copper washers. This was one of the most fiddly bits as this was hand made from malleable copper pipe that had to be bent a little bit to get it to fit exactly. Dropped one bolt, heard it splash into the bilge water under the engine, had to fish by hand for a while to find it, then clean all the dirty water out.

Finally, bleed all the fuel system to release all the air, at last fire up the engine. Fantastic, she runs! Great feeling, celebrate with cool cans from the fridge. My only concern was a slight leaking around two of the cylinder head studs which suggested the head gasket may have been damaged when the engine overheated. I checked their torque with my torque wrench and they were correct. I took the rocker cover off and checked all the accessible studs. As every one was fine, I drew the line at removing the entire rocker assembly to check the torque on the studs hidden by this. There was no Swarfega or equivalent on board, so we cleaned our hands with washing up liquid.

The following morning was a perfect day. We sailed from Corsica about 1100 after a shopping trip to a local supermarket with Peter. We bought fresh provisions, also the local equivalent of Swarfega in case any more dirty work was needed. I phoned home on his mobile before we sailed. The engine took us out of the harbour before we hoisted the sails and set our course. I checked it over as purred along. Apart from a slight leak from one of the hoses, everything seemed to be working nicely. Once the engine had cooled a little, I repositioned the jubilee clip and the problem was cured. We topped up the freshwater cooling tank with a couple of litres.

So, on with the perfect day. Gentle wind, flat sea, temp 34 degrees, good company. Started with a glass of Pimms each, made with lemonade and a slice of fresh apple. While Peter and I had been shopping, he had asked Andrew to pay the harbourmaster and get a block of ice. Andrew is seven years younger than Peter and looks similar but more lightly built. His personality is quite different from his older brother's, though. He is much less worldly and practical, softer and quieter. When Peter and I returned, Andrew had failed to complete either of his allotted tasks. John stowed the provisions then went off to pay while Peter, who had decided we could not put to sea without ice, and I went in search of 'du glace'. Peter's French is appalling, but between us we located an ice vendor and returned with a huge block. Lumps of this were broken off with a hammer to have with our Pimms while Peter mercilessly teased his hapless brother. "Have we got any ***ice*** on board?" or "Could I have some more ***ice*** please, Andrew?" or "Just as well we've got some ***ice*** for our drinks, isn't it?". After 3 or 4 glasses of Pimms each, it was onto cool beers from the fridge. Lunch was fresh French bread, fresh tomatoes, French cheese and salamis, washed down with a couple of bottles of pleasant white wine (between the four of us), then coffee all round, before cooling down with some more cool Budweiser. The hand cleaner was a paste, the French for which is paté. John, when he had stowed the provisions whilst Peter and I were off searching for ice, had seen the word paté, and had not bothered with the *'pour nettoyant les mains'* (for cleaning the hands). Quite sensibly, he had put the paté in the fridge. In between teasing Andrew over the ice, Peter occasionally teased John over the hand cleaner in the fridge. "We wouldn't want it to go off, would we?"

John is an experienced sailor, so between him and Peter there was enough maritime proficiency to ensure our successful progress towards Elba. I was soaking up the details of the GPS (Global Positioning System satellite navigation system) and the electronic autopilot, while also learning how to adjust the sails for the prevailing wind and desired direction and control the helm to maintain a course manually while sailing as close to the wind as the boat would manage. The actual

mechanics of manipulating the sails with rope and winches is straightforward enough, but it is going to take a little longer to get the feel of the art of apparent wind speed and direction and sail angle. Peter became quite maudlin, reminiscing over youthful experiences. So happy with the perfection of circumstances he was close to tears. Music from Tina Turner, Roberta Flack, Elvis and others drifting up to the cockpit from below. Fired up engine to help sails at about 1600, sighted Elba about 1700. Able was I ere I saw Elba.

We had planned to meet up with Jeremy and his family for dinner on Elba, but as we sailed along the south coast of Elba, we were treated to a beautiful Mediterranean sunset in our wake. Beautiful, but it meant it made more sense to put in to Golfo Stella on the south coast rather than continue round Punta dei Ripalti in the dark and up the east coast into Porto Azzuro for our rendez vous. Peter called up Jeremy on their mobile phones and rearranged the rendez vous for the morning. We arrived and dropped anchor in a quiet little bay with a few other boats bobbing about at anchor.

Although it was dark, the sky was clear which gave us some moonlight and there were three lights on shore which seemed to be aimed out into the bay. This combination gave enough light to work by, but kept it dark enough to be comfortable. While John, Andrew and myself were sorting out anchor chain, sails and other items, Peter disappeared below unnoticed by the rest of us. Suddenly there was a shout as he reappeared in swimming costume and dived into the dark water. Andrew put on his costume and joined his older brother in the water. In view of the dark conditions and privacy of our circumstances, I couldn't see the point of wetting my bathing costume, so I peeled off and dived in *au naturel*. As I was about to launch myself, Andrew, who had climbed back on board commented quietly with just a hint of gentle sarcasm "Adonis". John was the last in, in trunks, I'm afraid. Having seen me, Peter and Andrew realised the error of their ways and were soon in similar apparel to me.

We turned in after a bite to eat, prepared by yours truly. Pasta with a tin of ratatouille and a jar of bolognese sauce heated mixed and poured on. The anchorage proved to be less idyllic than it appeared when it came to passing a night. The wind and waves came straight into the bay, so the boat was pitching and rolling badly all night. Peter's berth is in the saloon which is in the centre of the boat (amidships, as us old sea dogs say), I am sleeping in the forward cabin as it is better suited to less taller adults, John and Andrew are together in the more spacious aft cabin. Perhaps because of this, Peter slept fine but the rest of us had a terrible night's sleep. Come the morning we blearily arose and dressed. Peter was keen to move, so we hoisted the anchor without pausing for breakfast or even coffee. John and Andrew were allocated to this task, but were having some difficulty. Peter started to berate them, but it became apparent that there was a major problem. I put on my snorkelling gear (including my bathing costume on this occasion) and dropped over the side. The anchor had become tangled on a buoy line which was attached to a huge concrete block on the sea bed. We lowered the anchor enough to put the block back on the bottom, then I dived down and managed to gradually undo the tangle. At the third dive I completed the task and we were free to raise the anchor out of the water and set sail. A this point Peter announced that

we had 'something wrapped round the rudder'. I swam round and inspected the rudder. There was nothing attached, but it was turned to starboard and only moved a few degrees either way. I had a good look at its mountings, but everything seemed correct. We dropped anchor again and I climbed aboard. The boat is called Angharad, named after a Welsh princess. She was built 16 years ago for Peter's father, also a surgeon. Peter knows every inch of the boat, having taken her over when his father died and having sailed her regularly before. He and I started checking all the steering mechanism. The night of rocking had caused a clamp in the steering linkage to loosen and slide down the vertical bar to which it was clamped. It was now at the base, where it was jamming against the heads of the housing bolts. I slid the clamp back up and tightened the pinch bolt. The steering was now fine, so we weighed anchor once again, this time without problem, and sailed around to Porto Azzuro to meet Jeremy and his family. We inflated the tender, mounted the small outboard engine and went ashore. Peter changed £20 into Italian Lira (over 50,000) and we bought some fresh bread, milk, cheese and cooked meats at a supermarket, then waited to meet Jeremy as arranged.

Jeremy duly arrived, along with his partner, Judy, and their 7 year old daughter, Julia. Apparently, it is his family tradition for everyone to be given a name starting with J, though I assume Judy was serendipity. His family have owned a villa in Elba for 30 years. Peter and Jeremy had a holiday there as students many years ago. The villa is simple but attractive, high on a hill with a lovely view down over a bay and a fair bit of land. We wandered about picking figs and bunches of grapes to add to our provisions; we don't want to get scurvy, do we? We started to light the barbecue, when there then followed the most torrential downpour, along with dramatic and very nearby lightening. The barbecue was sheltered enough under a grape vine to keep going, but we ate the main course inside. The rain stopped as dramatically as it had begun, so we had dessert outside. I picked up some small oranges and did some juggling for Julia, who was suitably impressed. I also did cat's cradle with her, which was also appreciated. She is clearly a bright child, but she is an only child and I think her holiday with her parents leaves her a little short of playmates.

After lunch and a rest, Jeremy drove us back to the beach in two goes, and we took everyone on board in two trips with the tender. I was on the first load with Peter, who stayed on board stowing our provisions and making ready to sail, while I returned to pick up the others from the beach. It was the first time I had driven an inflatable with an outboard since my scuba diving days. Once everyone was on board and anchor had been weighed, we set off for a cruise around Elba. There was enough wind for sails initially, but it gradually died away so we ended up using the engine. I had quite a chat with Judy, also with Julia who was giving away a few family secrets as only 7 year olds can. Although the weather had been clear at first, as the end of the little cruise drew near, the heavens opened again. We put our passengers ashore in the capital, Portoferraio, then moved into the bay and dropped anchor. The rain eased and the air became very still for a while. We were down below when we heard the wind rising again. We heard a shout from a boat anchored nearby. We came up on deck to find a strong wind which had veered. We had almost swung against the other boat, so, as the rain once more fell in sheets, we raised anchor, repositioned the boat and redropped the anchor. I was at

the bow in charge of the anchor, but it was difficult to hear Peter at the wheel in the wind and torrential rain, so John was between us, relaying Peter's commands to me.

We had a fair distance to go to return the boat to her winter berth in Mallorca and catch our flight home, so the following morning, Wednesday, we made a 5 am start. The weather was now better. There was very little wind and we used the motor for most of the morning. I rechecked the cooling water before we started her each time. There was a slight loss, although I could not see anything leaking outside the engine, so I suspect there is a small crack in the head gasket, allowing some water to seep into the block.

I had noticed that there was nothing to indicate the central spar on the steering wheel, so I put on a Turks head, which is the traditional decorative knot used for this purpose. On a previous trip, Debbie had inadvertently pulled out the third reefing line from the boom. I had also noticed that the second line was tied into the ring on the boom intended for the third line. I was keen to fix this, so John and I began. I hooked the second line out through the channel for the third line at the back of the boom. This required the removal of a pulley, which John and I did very carefully so as not to drop it into the boom where it would be almost irretrievable. There is one pin holding three pulleys, but we carefully eased it out just far enough to remove the first pulley only, making sure the other two did not drop. We then tied a thin line onto the second reefing line, pulled the two along the boom and out at the mast end. We had to take out the pulleys and cleats to be able to retrieve the thin line through the third channel. We now had a thin line in the channel for the third reefing line. The original rope was on board, so we attached it to the thin line and pulled it back through. I gave the single pulley which John and I had so carefully removed to Peter, who by this time had become involved. I asked him to put it back, but unfortunately he just removed the pin which held all three pulleys. Yes, both the other two were now inside the boom. We discovered that there is a horizontal slot in the underside of the bracket at the end of the boom. This is presumable to allow water to drain out. It was almost, but not quite the size of the pulleys. After an hour or so of bashing the pulleys with a hammer, it was big enough for us to extract the pulleys. If Andrew wanted a response to **ice**, or John a response to **paté** they could now answer Peter with **pulleys**! We lubricated everything with silicon grease, reassembled both ends of the boom and retied the second and third reefing lines. While John and I had been fiddling with the reefing lines, Peter had sanded the oars for the tender and applied a coat of varnish. He referred to all this activity as 'fettling'.

The sea was becoming a bit choppy by now and none of us were too keen to go down into the galley to make lunch. Peter was unaffected by the sea, so he made sausage and mash for lunch. Gradually the wind freshened and the sea worsened over the afternoon and into the evening. Peter set us to keep watch for two hour spells overnight. He has a rule that the night watchman is always clipped on with a safety harness; to go overboard at night means almost certain death as no one would know for some time and no one would raise an alarm or know where to look to find you. In calm weather this might seem over cautious, but in this weather there was no debate.

John did 10 to midnight, I did midnight to 0200, during which the wind was rising noticeably and the waves, though not visible in the dark, were obviously getting much worse. Despite the wind and the sea, the sky remained clear, with all the stars and the milky way clearly visible. I helped Peter put 2 reefs in the mainsail after my watch. This involved being out on a heaving deck, fiddling with ropes and winches. I was already feeling decidedly unwell by the end of my watch. By the time we had reefed the sail, I was feeling a lot worse and as I climbed back down into the cockpit I threw up. "I don't think much of the way you cook sausages" I shouted up at him through the wind between mouthfuls, "they taste awful". Although I had spewed over the side deck planking, the sea was washing over this area enough to clear it all away, so I staggered down to the main cabin and collapsed on a bunk. The forward cabin would have been out of the question as all movements of the boat are most magnified here.

I slept reasonably until 8 am on Thursday, when I was woken by a shout. "Can you come up here and take over the steering, all the instruments have packed up". Peter had finished his watch steering manually by compass as the GPS, wind speed and direction and autopilot had all failed. I took over and he went below to see if he could get them working again. He failed and we were reduced to manual steering all day on a compass bearing. Fortunately, we still had a hand-held GPS (Magellan - affectionately known as Magsy). We took a regular fix with this throughout the day and Peter or John went down to the chart table to plot our position. I tried to spend most of the time up in the cockpit as I found this was where I felt least sick, apart from lying down with my eyes closed. Andrew was very sick and stayed in his bunk more or less the whole day. The weather gradually continued to deteriorate. John and Peter estimated it as force 8 (gale), but we had no accurate wind speed as all the instruments were still non-functional, apart from compass and boat speed. We were making 8 knots on the mainsail with two reefs and the foresail almost furled. We sailed through a couple of sudden weather changes, with more torrential rain. While Peter was asleep, during one of these changes in wind direction when John was at the helm we put in a tack. I remember noticing as I was bent over furiously winding the winch handle to tighten the port foresail sheet how heavily the rain was beating down on my exposed head. At first the water pouring into my mouth was salty from the spray in my hair, but as I continued winding, it turned fresh from the rain.

Thursday night was worse. By now, huge waves were breaking against the starboard side. While John was at the helm, the cockpit awning was torn off its attachment by one. My watch began again at midnight - I threw up as I took the wheel from Peter. This time I didn't even make it to the side deck planking, I just honked over the cockpit seating. As I had had no food all day, there wasn't much to bring up, and what little there was was rapidly washed away by all the water crashing into the cockpit. I was wearing an oilskin jacket over my T shirt and sweatshirt and shorts. The water was not particularly cold, and it mostly ran off the jacket straight down my bare legs and feet, so my clothes were fairly dry. I spent the next two hours standing at the wheel with the boat heeled hard over to port, all my weight on my left heel jammed into the corner of cockpit decking. Sore foot! I found it difficult to sit, partly because of the angle of the boat and the way she was being tossed about, also I felt slightly less sick if I was standing. The sky was very clear

again. Because of the movement of the boat, the compass was swinging wildly in its gimbals, but if I kept the handle of the Plough over the starboard foresail winch we were about on course. Later, as one huge wave hit us, I heard some crashing from the cabin. A cutlery drawer in the galley had broken loose and the drink cupboard had burst open. All the drawers and doors had catches to keep them shut, and Peter later told me he had never known any of them to open in any weather. I looked down briefly from my steering to see Peter rescuing three bottles of booze and various glasses. I couldn't look down into the cabin for long as it made my sickness worse.

I finished my watch at 2 am and went down to the bunk as I handed over to John. Almost without warning I threw up twice into the sheet, then collapsed back. Peter took away the sheet full of liquid vomit. If I opened my eyes or lifted up my head I felt worse. After about half hour I had a go at removing my safety harness; I found it difficult to do while lying down in the dark with my eyes closed. It took another quarter of an hour to recover from this effort before I felt up to trying to take my wet oilskin jacket off, still lying down. I had no bedding and I felt cold, but I didn't want to disturb Peter's rest. At 4 am when John called Peter for his watch, I asked Peter for some bedding. "Have my bunk, it's a bit damp but it's OK". I took a deep breath and managed to cross the cabin to Peter's side into a warm but damp bunk. It was also better as it was on the port side and the boat was heeled over to port. In my bunk on the starboard side I'd been held in by a canvas leeboard which was much less comfortable. As I lay down, I heard Peter ask John how he was doing. "It's a bit hairy up here" came the reply.

I slept brilliantly for two hours before being woken at 6 am for my watch. It was beginning to get light and the waves were now visible. They seemed huge, some of them were breaking at their top and they were higher than the cockpit. Peter had altered course a little to help ride the waves. We were still making good speed with very little sail up. The occasional wave was still breaking over the cockpit, but it was much easier to anticipate when I could see and was able to turn into bigger ones to take them head on. There was a beautiful sunrise, although it was difficult to appreciate as it was behind me and I had to concentrate on steering a compass course and watching for waves. I felt reasonably OK while steering. John was due to take over from me at 8. I was going to let him lie in, but he came up at 8 without being called and offered to take over. I carried on at the helm for its antiemetic effect, but eventually I went below and lay down again.

Although I say so myself, when steering at night in the dark on a boat being tossed about, it really was quite useful to be able to feel which was the central spar on the wheel. Although I described my Turk's head knot as the traditional decorative knot, it did actually have a useful function and the others also commented on this.

At some stage during all this entertainment, I remember Peter clearing liquid butter off the floor. The fridge can run on gas or electricity; Peter was running it on gas to save battery power. For some reason, the fridge had not only stopped cooling, but had become warm and the butter had melted, oozing out onto the floor of the cabin. We later learned that the gas flame works the compressor, but once the fridge is tilted past 30º, this fails and the flame heats the fridge. We had obviously been heeled over well past 30º.

The wind gradually eased during Friday morning, although the sea was still very heavy. Andrew surfaced in the afternoon, looking somewhat washed out. As the wind was still dying down we took the reefs out of the mainsail and unfurled the foresail. John made some cappuccino, my first drink apart from occasional mouthfuls of water since Wednesday. He had difficulty getting the cooker to light as all the matches were damp. Peter had installed a car cigarette lighter to be able to charge his mobile phone while at sea. John used the cigarette lighter to get the match head to flare over the gas ring. On Thursday, John had eaten two bananas, I had asked for about 1 inch of each, otherwise I had no food since Peter's sausages on Wednesday afternoon, the ones which had reappeared at 2.30 am.

Later on Friday the wind died still further and we started the engine. Pete managed to get the instruments working again, apart from the autopilot. The sea was slowly calming, though still lumpy. Peter opened a big packet of crisps and we all tucked in, including Andrew. We also opened some cans of soft drinks.

The boat has a shower and loo by the forward cabin and another aft. Throughout the storm none of us had shown much inclination to use them, except, I think, Andrew, who had used the aft one as his personal vomitarium. Now, with the sea calmer, we all freshened up. What bliss to stand under a hot, fresh water shower. I also brushed my teeth for the first time since Wednesday morning, another luxury normally taken for granted.

On Friday night I tried lying in the forward cabin again, but the boat was still pitching badly and the cabin was going up and down too much for me so I returned to my starboard bunk. John found the engine made the aft cabin too noisy, so he came up to the forward cabin. Andrew was now back sharing the night watches. He took the 10 to midnight, I took over at midnight. It was another beautiful, clear starry night. By 2 am when Peter came up for his watch the wind was picking up enough to sail. We hoisted the sails and cut the engine. John had coped with the forward cabin, but when he heard the engine stop he was relieved to be able to return to his bunk aft.

Andrew was on again from 6 to 8 am, then it was me again. I awoke spontaneously at 8. I could hear the engine and the boat's motion was much more gentle. I came out to the cockpit to see an almost flat, calm sea with no wind and the sails flapping idly. Mallorca was just visible on the distant horizon. I furled the foresail and took in the main sheet before taking over the helm.

We motored all day. Peter and I cleaned the gas bottles and applied 2 coats of Turtle wax to try to prevent them rusting. Peter also applied another coat of varnish to the oars. Andrew washed his vomit-stained clothing, including one shirt with some rather interesting green stains which Peter and I agreed must have been duodenal contents. Everything felt warm, calm and relaxed. Were these the same waters that had been breaking over us yesterday? The estimate by Peter and John was a force 8 to 9 wind, but with the main problem being the size and direction of the waves. Peter kept looking out over the calm, sunny water and informing us "It's always like this in the Med".

We dropped anchor in clear water outside Alcudia bay, Mallorca at about 4 pm. We all went snorkelling. Peter called his contacts in Mallorca to arrange to meet them to sort out the repairs and maintenance to the boat. We motored into the marina at about 5.30 pm. We tied up and began the task of hosing and scrubbing the decks and a big clean out inside. Peter discovered the forward lockers were waterlogged, particularly the one on the port side. Water had been taken in during the storm through the anchor chain stowage locker and had drained along the port side into the locker as the boat was heeled over to port. We took out the sails from the lockers onto the deck to dry, siphoned the water out of the lockers and hosed them and the cabin down with fresh water. The cockpit awning was intact, but a couple of its attaching studs had been sheared off the windscreen by the waves.

Peter then went off to "do business". To be fair, this did involve discussing all the problems that needed sorting out with the boat repair and maintenance agents, but the discussions seemed to be fairly informal and were conducted in the nearest bar. John, Andrew and myself all hastened to follow Peter, and were plied with several beers during the course of these discussions.

Later, we went for a big meal in a restaurant on the quayside of the marina. Peter suddenly showed exhaustion at about 10.30. Andrew lasted another half hour, but was also knackered. He was going to pay for the meal with cash, but he didn't have enough. John went back for his credit card, but it refused to work in the machine, presumably as a result of having been immersed in sea water when spray had got into the aft cabin. I paid with my card which, fortunately, still worked. The three of us went back to the boat and so to bed. I awoke at 6.30 to a still and silent marina, not a breath of wind, not a cloud in the sky, the sun not above the horizon yet. I wrote my diary until the others surfaced, then we went down to the washrooms for SS&S. Back for breakfast in the sun on the terrace of another quayside bar. Taxi to the airport at 10, farewell to Angharad and cruising in the Med - where it's always calm and sunny.