THE MISSING SNAKE
PRESIDENTIAL ADDRESS
AUCKLAND MEDICO-LEGAL SOCIETY
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Tonight we celebrate our Society's fiftieth birthday, and we do so, as with all our meetings, in most agreeable surroundings, with excellent food and very good wine. Wendy Brandon has been the Society's fiftieth president and we are entering its fifty-first year. It seems timely, therefore, to ask whether we are achieving the purpose of our society. What is that purpose? Five years ago, in his Presidential Address, Bruce Gray raised the question of whether our objective is simply to enjoy each others' company in the setting of an exclusive and pleasant dining club? The Society certainly did not start that way.

Mr Harman Smith, our eighteenth president, joined the Society in 1954, and is here tonight. He informs me that the Society began, appropriately enough, beneath the Supreme Court in the "dungeon" (as it was then called). Our first president was Sir Alexander Johnston, QC. Mr Lindsay Brown (a pathologist) and Mr Frank Hay (a lawyer) were amongst the people responsible for starting the Society.

In those days, litigation against doctors was alive and well. Meetings usually focused on matters relevant to that subject. Usually a doctor and a lawyer would talk about the medical and legal aspects of some contentious issue. You can imagine that if direct involvement with litigation (in one role or another) was an ever-present possibility, these talks would have been of considerable interest to members. Lloyd Brown QC, who was the secretary for many years, made the tea and provided chocolate biscuits after the address

Gavin Glasgow, a subsequent president of the Society, informs me that the real strength of the law library was that it was warm and comfortable, but unfortunately the Law Society needed it for other matters and it became necessary to move. The only place available was the lecture room at National Women's Hospital, which apparently was austere and had no facilities for making tea. People had to bring thermos flasks and chocolate biscuits gave way to wine biscuits. This combination of environmental and culinary deficiencies led to a nadir in the Society's affairs, with only 30 or 40 members attending the talks. Gavin Glasgow found himself facing the demise of the Society. So he conceived the idea of providing an excellent dinner and free drinks to revitalise the meetings. He masterminded the move to a better environment but it was Justice Sir Graham Speight, who was our 23rd president, who actually identified the Ellerslie Racing Club as a suitable venue. In the annual general meeting of 1975

the Committee decided to “go for broke” (according to Gavin), and advertised that the next meeting would include dinner, which on this first occasion would be free. The attendance was excellent, the format was highly successful, and the Society has thrived ever since.

At about this time, membership was opened to women, although I have not been able to find out what led to this bold initiative. Given this enlightened advance, and the excellent surroundings, food and wine that characterize our meetings, it is clear that, whatever its purpose, our Society is, at the least, a very pleasant dining club. For this reason alone, it is not surprising that we have flourished, and can claim 313 members (178 legal, 135 medical) today.

A change occurred in the medico-legal environment in New Zealand following the report by Sir Owen Woodhouse in 1967 which led to the establishment of the Accident Compensation Commission (ACC). It became virtually impossible to sue a doctor for negligence. In consequence, the interest in medical litigation waned, and the programme became more general, and more broadly based. It has continued in this fashion, and today it covers a wide range of subjects. Nevertheless, our speakers usually address topics of medical or legal interest, or both, and the exceptions tend to deal with matters of importance to any thinking person. It is our after dinner speakers who distinguish our Society and give it its unique character. Since the end of medical litigation, many of our sister societies have gone into decline, with the notable exception of the Wellington Medico-Legal Society. On the face of it, then, we can answer my question in the affirmative and claim resounding success for our Society. I would like to pay tribute to my fifty predecessors and it is to that end that we have prepared the list of past presidents and circulated them today. I would also like to pay tribute to all the other people who over the last fifty years have contributed to this success.

Having said this, I would like to delve more deeply into the value of whatever it is that we are so successfully doing as a Society. I have chosen to do this by reference to a case, because members have always displayed particular interest in cases, and the discussion of interesting cases is a strong part of our tradition.

First, however, I would like to ask what is so particular about doctors and lawyers that we want to get together on a regular basis. Why, for example, don’t we meet with plumbers (who might be more useful), or travel agents (who might be more interesting)? The clue lies in the two symbols which we have adopted for our Society and incorporated into the logo on our letterhead (Figure 1). These symbols are familiar, but do we know their origins and their

implications? I shall return to them later; for the moment I ask you simply to consider them, and to think about how they might relate to our the Society.

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Figure 1. image on the letterhead of the Auckland Medico-Legal Society

An anaesthetist was charged with manslaughter some years ago, in New Zealand, after a thirteen year old boy died during anaesthesia for a simple operation to debride an infected knee. It seemed to me that a major thrust of the evidence advanced by the public prosecutor in this case was the (emotionally compelling) argument that a thirteen year old boy, who was fit and well, should not have died under anaesthesia for minor surgery, so someone must be to blame. This point was emphasised throughout the case. The child had fallen while hunting and a punga thorn had become embedded in his knee. This had become infected and he was admitted to hospital, during the weekend, for treatment. Clearly his mother had done the right thing. She had brought her child to hospital, to be cured. Furthermore, she had even asked whether an anaesthetic was really necessary. She was obviously an engaged parent, who cared for her child. It is self-evidently unacceptable that the outcome of this exemplary maternal care should be disaster.

However, it seems equally true that the anaesthetist (who was a specialist) also tried to do the right thing, as best she could. She had been working on call all that Saturday and began this particular case late in the afternoon. The anaesthetic was uneventful until the very end, when she moved her patient from the operating table to the bed. At this point he regurgitated a small amount of stomach contents, some of which entered his trachea. He seemed to choke, sat up momentarily, and then collapsed. From this point on his condition went into a rapid decline that was absolutely terrifying. The anaesthetist tried desperately for nearly 30 minutes to resuscitate him. Her first move was to call for help. This was the right thing to do. The fact that help in any useful form (i.e., another anaesthetist, called in from home) took thirty minutes to arrive was not her fault. During those thirty minutes other people did arrive, but they were junior doctors and contributed very little of any benefit to the attempts to resuscitate the patient.

When the second anaesthetist finally did arrive, he was handed the anaesthetic breathing circuit to hold while the primary anaesthetist suctioned the endotracheal tube. He found himself unable to empty the re-breathing bag, and instantly identified that a filter in the circuit was blocked.

This blocked filter was to the case as a smoking gun is to a crime. If a second anaesthetist could come in and immediately identify the blocked filter, then, according to the prosecutor, failure to do so on the part of the primary anaesthetist over a period of thirty minutes was self-evidently negligent. Hence the charge of manslaughter.

At that time in New Zealand's legal history, the standard of negligence required for a conviction for manslaughter was the civil standard. The definition of negligence at this standard, internationally, generally comprises some variation to the theme of a failure to use reasonable knowledge, skill and care. This case was heard after the Crimes Amendment Act 1997, which changed the law in New Zealand to require "a substantial departure from reasonable knowledge, skill and care" for a finding of criminal negligence, but it was heard under the previous provisions of the law because of the date at which the events actually occurred. In general this was sound – people are tried under the law that pertains at the time of the events in question. However, in this case, the effect was rather bizarre. The members of the jury were assumed to be ignorant about the change in the law, and so a kind of pantomime was acted out to maintain this state of ignorance. The irony of this culminated in a question to me, from the prosecutor. He asked, presumably with the intent of discrediting me, whether or not I was the doctor who was known to have put a lot of effort into trying to get doctors off manslaughter. I replied in the negative and asked whether he would like me to explain precisely what it was that I was known for (i.e. advocating the change in the law – an answer that would have informed the jury of the rather unusual legal position in this case). The prosecutor closed down this line of questioning with a haste that might have been amusing if the implications had been less disturbing. In my view, Parliament's passing of the amendment to the Crimes Act gave a clear signal about the appropriate standard of negligence for criminal prosecutions of this type in New Zealand, and it seemed very odd to me that the jury should not be told about this development.

In assessing conduct for the purposes of establishing negligence, lawyers tend to take a highly individuating approach. This involves looking at each component of a cognitively integrated sequence of actions as if it had been performed in isolation. This was well illustrated in the present case. An important strategy for defence was to ask for the specifics of the charge to be refined until it was entirely focussed on the failure to identify the blocked filter. This took a certain amount of pre-trial negotiating, but once it had been achieved it meant that the whole case swung on this one point. An overall judgment of the standard of care was not relevant; all that mattered was whether or not the failure to identify the filter was the cause of death, and if so whether this constituted negligence. The prosecutor appeared comfortable with this position at the beginning of the case, presumably because he felt secure that both elements would be easily established. However, this confidence turned out to be unfounded. As the trial progressed it became apparent that the filter was not blocked in the

early phase of the crisis; instead the initial problem involved spasm of the muscles of the larynx in response to the aspirated gastric contents. In trying to breathe against this blockage the patient's lungs developed negative pressure frothing pulmonary oedema, which came up into the filter and subsequently blocked it. There was good evidence, including the presence of breath sounds twenty minutes into the case, that the filter only became blocked as a very late event. It was certainly possible, and indeed quite likely, that it became blocked only after irreversible brain death had occurred. It was interesting to observe that the prosecutor seemed to became less comfortable with the very focussed particulars of the charge as this evidence emerged, and appeared keen to broaden them. However, this was (of course) not permitted within the rules of the legal process.

This individuation of events is characteristic of criminal prosecutions. In a well known case involving another anaesthetist[1] the judge summed up the case of the prosecution by saying that the doctor was "a highly trained, experienced, responsible man whom the Crown says made a mistake through carelessness on one occasion." A similar theme emerged in a British case involving two junior doctors charged with manslaughter. In this case the judge said "You are far from being bad men. You are good men who contrary to your normal behaviour on this one occasion were guilty of momentary recklessness". I think doctors find this approach difficult to understand. It seems inherently unfair to suggest that one can practise in an exemplary fashion for an entire medical career, and then conduct a difficult case adequately in almost all respects only to be faced with criminal charges on the basis of the one respect which was inadequate.

This individuating approach makes more sense in the context of certain offences in which the moral opprobrium is more obvious. Consider, for example, a person of good character and unblemished record, who suddenly takes a dislike to an acquaintance and shoots him, and then very properly owns up to his actions and co-operates with the police in their investigation of the events. It is immediately apparent that one couldn't simply let that person off a charge of murder in these circumstances, although the mitigating factors might have an influence on sentencing. The difference between a deliberate crime, such as shooting someone, and negligence, is of course reflected in the charge – manslaughter in the latter case, rather than murder.

Many doctors may still have difficulty in accepting the proposition that individuation of events is reasonable in evaluating medical negligence. This approach is even harder to

accept when something has gone wrong in the process of trying to save the life of a patient who, in the absence of this attempt, would certainly have died anyway. Nevertheless, in law the fact that a patient was dying is irrelevant. In the illustrative case outlined above, it would be no defence to argue that the disliked acquaintance in question happened to have jumped out of a 30 floor building immediately before being shot, and would therefore have died anyway (leaving aside the quite separate question of euthanasia). It is against the law to shoot people even if they are falling from a building.

Individuation does not always carry the day, however. A well-known Australian case, known as Ryan v the Queen, demonstrates this. Ryan was involved in robbing a service station. I quote: "In the course of the robbery he told his victim to stand with his hands behind his back, in such a position that he could be tied up. Unfortunately, while the rifle was pointed at him, the victim made a sudden move. This caused Ryan's finger to squeeze the trigger in what he claimed was a reflex movement. It is a clear rule in criminal law that reflex actions do not 'count' as actions in respect of which there can be criminal liability. Ryan therefore argued that the act of killing the proprietor was an involuntary act for which he could not be held liable.

"The court took a contextual view of the reflex action, pointing out that events cannot be 'sliced up' in this way. There was an overall act – the act of robbing the filling station – and this was overwhelmingly voluntary, even if there was a single, momentary act within the sequence which could be described as involuntary. Culpability lay in the voluntary nature of the overall sequence of action – the bigger act, so to speak – and it is this which had to be judged. Ryan's appeal against conviction was therefore rejected." [2]

Clearly there is room to move in the degree to which individuation may be subsumed into a consideration of the wider context. I would like to enlarge on the reasons why I think a more all-encompassing approach, such as the one taken in Ryan (albeit with the emphasis on defence rather than prosecution) might often be appropriate in medical cases.

A recent newspaper story involved an expert parachutist. He was a veteran of over 100 jumps. On the occasion of the story his parachute failed to open. Had he been less expert he would probably have done the right thing, and activated his reserve shoot immediately. However, because he was good at parachuting, he thought he might be able to sort out the problem. He looked up at the parachute and saw that the cord had become jammed, and worked out that it might be possible to free it. This approach, working things out from first

principles, is a very powerful form of cognition known as *knowledge-based reasoning* [3] or *deliberative reasoning*[2]. It underpins a great deal of medical science, but it has one drawback - it takes time. When one is hurtling towards the ground at terminal velocity time is limited. Fortunately at the last minute the parachutist remembered that it would be better to activate the reserve shoot, and he survived the fall.

This story illustrates a number of points. Experts make errors – although the errors made be an expert tend to differ from those made by a novice. Errors are not typically evidence of carelessness – one assumes that the parachutist cared about doing the right thing. The corollary of this point is that deterrence is seldom effective in preventing errors. If the thought of crashing into the ground from a great height does not deter an error, draconian laws are unlikely to be any more effective. Finally, many of the things that doctors undertake are very difficult, and they are often undertaken in circumstances which are not ideal.

A video also illustrates these points, and in addition demonstrates one further, very important principle – that the outcome of an accident is often more a matter of luck than of justice. This video shows an expert skier "wiping out" in the middle of a very difficult run in the Remarkables, despite obviously trying very hard to complete the run and despite a very high level of skill and expertise. After an alarming fall of many feet over a rocky precipice the skier is able to stand up and is obviously uninjured. Errors which do not cause harm are seldom punished, but there is seldom any intrinsic difference in culpability between those which do cause harm and those which don't. The tendency of people to judge events on the basis of their outcome rather than on their culpability is well established [4].

I would like now to return to our case history. Dealing with an anaesthetic crisis is very much like trying to deal with an unopened parachute: there is a very short period of time to work out the problem before hypoxic brain damage develops. Crises do not arrive with their underlying causes blazoned across the operating room in neon lights. Blocked filters are very rare, and have seldom been reported in the anaesthetic literature. There were numerous reasons in the present case why the anaesthetist might have believed that she was dealing with a patient-related problem. Firstly, she had used her equipment successfully all day and so had no reason to believe there was anything wrong with it. Secondly, the problems had clearly started with regurgitation – a patient-related problem. Thirdly when the emergency team arrived one of these junior doctors also diagnosed a problem with the patient (she thought the patient might be suffering from a pulmonary embolism which in reality was extraordinarily

unlikely – this contribution was probably distracting and unhelpful). All the evidence pointed to the patient – and all the while time was passing, just as it was for the parachutist. Confirmation bias is a recognised phenomenon in which new events tend to be interpreted as reinforcing one's original diagnosis. This is a very powerful factor in cognition. This anaesthetist would have had her original diagnosis of a patient-related problem reinforced by each new event. It would have been a completely different matter for the second anaesthetist: he walked into a situation without any preconceptions, he did not have the overwhelming sense of responsibility associated with having administered the anaesthetic which had gone so terribly wrong, and he actually had the diagnosis handed to him (literally) by the way in which the circuit was disconnected and passed to him to hold. The inference that the blocked filter was obvious because the second anaesthetist diagnosed it immediately is simply not reasonable.

A good understanding of the definition of error is fundamental to understanding negligence. A lay definition, which I think is useful, is this: an error is when you are trying to do the right thing but you actually do the wrong thing. In contrast, a violation is when you know something is wrong, but choose to do it anyway. A Denver anaesthesiologist was convicted of negligence in 1996 in relation to the death of an 8 year old child [5]. It was alleged that he was asleep during the anaesthetic. He denied this, but admitted that he had been confronted by his colleagues on a number of occasions for having been asleep during previous anaesthetics. This story raises an interesting question as to who was really responsible for the accident, because it seems reasonable to assume that if his colleagues were really worried they should have done something about the problem. It is also interesting to contrast this case with that of a barrister who apparently fell asleep during a long trial. This became the basis of an appeal. However the appeal court found that being asleep had made no difference to the outcome of the case, so the appeal was turned down. And lest I be accused of simply scoring points off lawyers, let me tell you about some recent research in anaesthesia done in Stanford. Junior anaesthetists were kept awake all night and then brought into a simulated operating theatre, wired up to electroencephalograms, and asked to give simulated anaesthetics. It was shown that micro-sleeps occurred during these anaesthetics, but no harm resulted. One can only conclude that, as with barristers and law cases, you don't have to actually be awake to give anaesthetics.

I would like now to consider the concept of reasonableness. Reasonableness is fundamental to the determination of negligence – but what is reasonable? Error is never

reasonable when looked at with hindsight. For example, if one asks, "Is it reasonable to give the wrong drug?", the answer must be "No." However, I think this is not the right question. I think the focus should be on the person, not the event. If you change the question and ask instead, "Is giving the wrong drug the sort of thing that a reasonable person can do?", then the answer may be different. In fact the law recognises this. In his judgment in *Whitehouse v. Jordan*, an obstetric negligence case, Lord Denning observed that an error of judgment in a professional context did not amount to negligence[2]. To test this, he said, "one might ask the average competent and careful practitioner: 'Is this the sort of mistake that you yourself might have made?' If he says: 'Yes, even doing the best I could, it might have happened to me', then it is not negligent."

I think that this would be a good test to apply to the anaesthetist in the present case. All four experts agreed that the same thing could have happened to them. However, in a nice irony it appears that the learned Judge had himself made a mistake because, at the House of Lords, this passage was "corrected"; Lord Fraser courteously suggested that what Lord Denning had *meant* to say was that an error of judgment was not *necessarily* negligent. "The true position," he (Lord Fraser) said, "is that an error of judgment may, or may not, be negligent; it depends on the nature of the error."

This, I think, is correct – and the point I have tried to illustrate today is that apparently simple errors may in reality be relatively complex when examined in closer detail.

A further point is relevant. In 1982, John Wennberg published data highlighting variability in prostate surgery and hysterectomy across the USA, suggesting that this variability was more likely to be due to differences in practice between providers of healthcare than to differences between groups of patients[6]. More recently, David Wennberg's group from the Center for the Evaluative Clinical Sciences at Dartmouth Medical School has published a series of healthcare atlases which document major variation between regions and even between institutions in the same region in many aspects of healthcare (including outcome). This variation typically exceeds anything that could be explained by casemix or economic differences between areas. For example, the variation in angioplasty and stenting between regions in the USA was 18-fold; for carotid endarterectomy it was 8-fold; and for vena cava filter placement, 26-fold. It is not possible to say from these data whether the upper or lower extremes of the range in question is appropriate (or perhaps some value between the two), but both cannot be correct. It follows that either some patients are missing out on

treatment they should be receiving, some are getting treatments they would be better off without, or (most probably) both. If an error is made during the treatment which was unnecessary, and the patient suffers avoidable harm in consequence of the error, a strong argument could be made that the root cause of the harm was the decision to carry out the procedure in the first place.

I suggest the same point could be made about some legal cases. In the present case, all four experts said the general conduct of the resuscitation was adequate. In particular, the anaesthetist had called for help promptly, initiated cardiopulmonary resuscitation, changed the endotracheal tube, and administered adrenaline. Surely we should not judge her on the basis that her efforts may have fallen short of perfection? Having accepted that, one must then ask at what level do we expect a doctor to perform? – that of the 90^{th} percentile, the 50^{th} percentile, or the 10^{th} percentile? We do not want to be like the British cabinet minister who demanded that all doctors should be above average.

Furthermore, none of the experts was prepared, without reservation, to criticize the failure to diagnose the blocked filter. In the end, the prosecutor asked the jury to disregard the evidence of all the experts – including the ones he had called himself! The judge commented on this as "unusual". It is perhaps not surprising that the jury took less than an hour to come to a "Not guilty" verdict, and that costs to the extent of $70 000 were eventually recovered. What is surprising to me is that the case was brought at all, or at least that it was pursued to the bitter end in the face of mounting evidence to the effect that the "smoking gun" was not as it had initially seemed. Not only were the prosecutor's own witnesses equivocal on the merits of the charge, but the law of the land had changed. In the end, the patient's mother was deeply dissatisfied with a process in which the focus was on a single factor rather than on the overall standard of care exhibited by the anaesthetist. Although the anaesthetist was found not guilty, the media did not adequately reflect the facts of the case, and she ended up emigrating from New Zealand. It seems that there were multiple victims, and there is little to suggest that the system served anyone very well. I would suggest there is a strong parallel between prosecutions such as this and unnecessary surgical operations.

Which brings us back to the purpose of our Society and to its rather arcane symbols. I have said that it is our speakers who distinguish our Society and give it its unique character. Without doubt we need entertaining and thought provoking speakers, but in addition our speakers should advance our understanding of complicated medico-legal issues which may

have a profound effect on the people we serve. A more sophisticated and perceptive approach to practice on all our parts is in the interests of New Zealand. This was our primary objective at the birth of our Society, fifty years ago, and I believe it ought still to be.

What of the symbols in our logo? The first of these is a set of scales; typically these scales are shown in the left hand of Themis, the Greek goddess of justice (called Justitia by the Romans). They represent fairness and balance. The Lady of Justice is usually depicted as also holding a sword in her right hand; the sword is a symbol of enforcement. Today she is almost always depicted as blindfolded – but the blindfold was only added in the 16th or 17th century. There are two views on its significance. One is a positive view – that the blindfold represents impartiality. The other view is more cynical – it suggests that the blindfold was added to indicate that the courts could not see what was in front of their noses and that justice was indeed blind.

It is received wisdom that the symbol "properly" representing medicine consists of a (single) snake, coiled around a staff, and this is the symbol we have incorporated into our logo. The snake is *Coluber longissimus,* also called *Coluber aesculapii*. Harmless, and typically about 4 foot long, this is one of two snakes widely distributed throughout Europe. It climbs well, and can swim. Although savage when first caught, most members of the species become tame and like being handled by familiar people, although not by strangers[7]. The staff belongs to Asclepius (Aesculapius to the Romans). The legend of Asclepius may derive from a real person, a great physician who lived in about 1200 BC. The symbolism of the snake is obscure, with various explanations of which most are implausibly prosaic. Serpents hold a pre-eminent position in the individual and collective subconscious of mankind [8], so their place in this symbol is not surprising. Neither is it surprising that, in the legend, Asclepius appeared, at times, in the form of a snake. In legend he acquired a substantial knowledge of surgery, and also of pharmacology. Foremost in his pharmacopoeia was a potion from Athena, derived from the blood of a gorgon. If the blood was taken from the left of the gorgon, it was poisonous, but if taken from the right it had miraculous healing properties. So powerful were these latter properties that Asclepius succeeded in raising the dead. It is not necessarily advisable today for a physician to become too successful in his or her art, nor was it then – Zeus took objection to this mortal's overstepping of the mark, and dispatched Asclepius with a thunderbolt. However, the cult of Asclepius survived and for centuries ill people were tended in *Asclepieia* – places of refuge populated with tame snakes. It is

interesting to note that Hippocrates (460 – 377 BC), the father of modern medicine, was a 20th generation member of the cult of Asclepius, and trained in the Asclepium of Cos.

There is, however, another symbol often associated with medical practice. This symbol also involves snakes intertwined around a staff, but there are two snakes and the staff has wings. This is the caduceous of Hermes, a symbol adopted by the United States Army Medical Corp in 1902, and by a number of other medical organisations. It is fairly clear that the staff of Asclepius is the symbol better established by tradition as representing medical practice - but is it really the better of the two to represent the ethos of medicine, or to illuminate our current deliberations and represent the objectives of our Society?

Hermes (Mercury to the Romans) was the messenger of the Olympian Gods, and was also the god of commerce, of athletes, of fertility and of thieves. The latter affiliation has lead many doctors to reject his symbol as representative of medicine, often in rather wounded phraseology - but there may be lay people who would see some relevance to certain aspects of modern medicine even in this part of Hermes' portfolio! Hermes invented the lyre, brought sleep and dreams to mortals, and conducted the souls of the dead to the underworld. For some reason the latter duty has also been cited by doctors as justification for rejecting his symbol – as if doctors had no role with the dying. Hermes also contributed to saving the life of the unborn Asclepius when Apollo killed his unfaithful mortal lover Coronis (Asclepius' mother). Thus to the extent that Asclepius contributed to medicine, Hermes can also take some credit.

My own interest in Hermes, however, comes from an account related by the Canadian author, Robertson Davies, in the posthumously published book of his lectures, "The Merry Heart" [9]. According to this account, Hermes was out walking one day, when he came across two snakes fighting. He thrust his staff between them, and they coiled themselves around it, to be held in eternal equipoise representing the struggle between two aspects of medical practice. One snake represents knowledge, and I suppose technology and skill. The other represents wisdom. Ethical decision making in medicine, and for that matter in the law, depends on both. The risk we face today is that we may be unduly influenced by the extraordinary advances in our knowledge and technology and fail to balance the possibilities created by these with the wisdom that has informed our professions since the days of the ancient Greeks.

Thus the staff of Asclepius has a missing snake, and I for one prefer the symbolism of the caduceous of Hermes. Lest I sound too pious, however, I would like to make one further point about Hermes. Semele was the mortal wife of Zeus. She was persuaded by Hera

(another of his wives, who was jealous) to ask Zeus to reveal himself to her in all his glory. Eventually Zeus agreed, and in the event Semele was conflagrated by the brilliance of his visage. At this point, Hermes rescued her unborn son (the rescuing of unborn children appears to have been a habit of his), and for this reason alone I would choose Hermes' staff over that of Asclepius as a symbol for those of us who believe that knowledge and skill in any applied science must be tempered with wisdom, and with a broadly based appreciation of life. The rescued child, you see, was none other than Dionysis, later known to the Romans as Bacchus.

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