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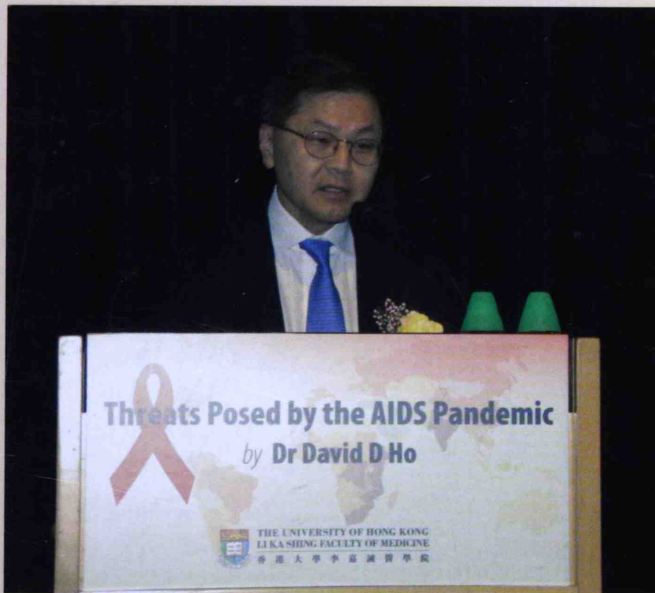
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# The Making Of A Successful Scientist: Dr David Ho's Inspiring Story

Excitement was in the air. On December 4<sup>th</sup>, 2008, scores of people all over Hong Kong were watching as Dr David Ho was awarded an Honorary Degree by HKU for his pioneering work on a devastating disease – an epidemic which continues to kill more than 5,800 people around the world every single day. That's right, we're talking about AIDS.

Dr Ho's first major discovery was that HIV, the virus that causes AIDS, is not dormant during the asymptomatic phase, as the scientific community had firmly believed, but is already active and rapidly replicating. This prompted him to realize the importance of combating the virus as early as possible, even if the patient appears to be well. He thus played a pivotal role in shifting the attention from treating the final stages of infection to fast and early treatment. In fact, Dr Ho is best known for his revolutionary "cocktail therapy", a hugely successful treatment for AIDS which has improved the quality of life and chance of survival of countless sufferers.



For an amazing 27 years now, Dr Ho has been pursuing his dream of curing the infection and developing a vaccine. His never-ending string of successes and epic achievements seems almost effortless. It was this which prompted me to find out what exactly has made him such a successful scientist. Indeed, behind his humble and tranquil façade lies a man with an incredible story: a story in which hard work, determination, optimism and

passion triumph over all adversities. A story which every single one of us can learn from.

Born in a small city in Taiwan, Dr Ho spent nine years of his childhood separated from his father, who was pursuing graduate studies in America. He looked forward to the day when the family could be reunited, and that day finally came when he was twelve as his whole family could finally migrate to the US and join his father. Unfortunately, the sudden transition to a new world and the stress of adopting a new language were overwhelming. Unable to speak or read a word of English, school was nearly impossible and, needless to say, he was mocked by some of his classmates. All of a sudden, he had slid from the top of his class in Taiwan to the bottom, simply because he could not communicate. The first few months were unimaginably tough.

*"To prevent corruption of praise is to keep on working"*

Fortunately, he was resilient. He refused to give in, and within 6 months he had already overcome his language barrier. Even more surprisingly, he graduated from high school with honours! Nonetheless, the ordeal did leave its mark on him. He became introverted and it was not until after college and medical school that he regained his confidence and opened up again.

But how did Dr Ho get involved with AIDS in the first place? Like all serendipitous encounters, there was an element of chance involved. In 1981, as a young medical resident barely out of medical school, he happened to see the very first cases of this mysterious disease trickle into hospitals in Los Angeles. These cases were mysterious for several reasons: not only did they seem to occur only in young gay men, but these patients, who had previously been healthy, were now coming down with a variety of infections which normally only occur in immunocompromised patients. Scores of doctors and scientists, Dr Ho amongst them, were baffled. This novel disease could not be found in any textbooks or medical

literature. It was a complete mystery, and because of this, Dr Ho was immediately hooked. So had he not been gripped from the start, had his intellectual curiosity not gotten the better of him and had it not been for his courage in tackling something so new and unknown, he would never have begun his life's greatest work!

However, for the first 10 years or so of research, life was difficult for Dr Ho and other scientists studying AIDS. Because nobody knew anything about the disease, they had to start from scratch, find out the common link behind the cases, then piece all the information together and integrate them into a complete picture. Although there were some successes in the laboratory, there was still so much they did not understand that they could not do much to help the sufferers. Meanwhile, more and more AIDS patients died. It was a very distressing time for Dr Ho, particularly as many of his patients were around the same age as him. So what helped him overcome his grief during those arduous years? It was his overwhelming desire both to solve this scientific mystery and to halt this terrible epidemic. Like other great scientists, it was his fascination with the biological underpinnings that kept him going throughout the years. Always the ambitious type, he set himself the ultimate goal: to control and even eradicate the virus.

His compassion and desire to help people was demonstrated clearly from the way that he cared for the earliest AIDS victims, back in the 1980s, when most of them were stigmatised and rejected by the society, their friends and even family because they were homosexuals or drug abusers. In fact, even the Centre for Disease Control initially named the outbreak "Gay-related immune deficiency", stigmatizing both the disease and the gay community. Some of his colleagues teased Dr Ho, saying that he was always looking for gay men, but he easily brushed the ridicule aside. He treated his patients equally: neither questioning whether gay men or drug addicts should receive the same amount of medical attention as other patients, nor wondering

*"We were looking at something that was transmissible, capable of destroying the immune system... I was gung-ho from day one of the epidemic"*

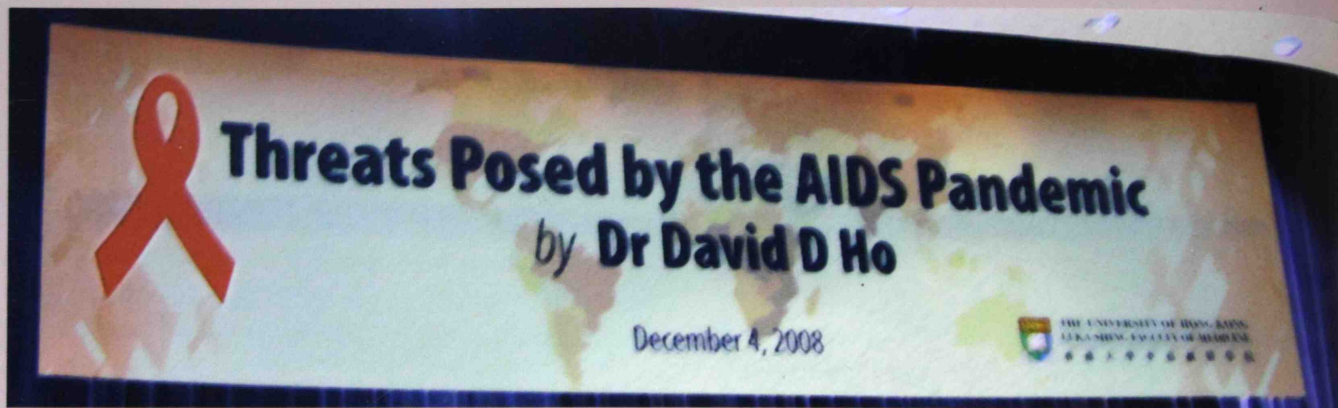
if it was worth investigating a disease which only seemed to affect a group of people who led a particular lifestyle.

Not surprisingly, Dr Ho was adept at spotting connections that no-one else noticed. He therefore continually made discoveries which overturned "conventional wisdom" in the scientific community and pushed AIDS research forward in great leaps. To pull out one example from his illustrious career, consider the way in which he discovered that HIV is never dormant and that the virus and the body's immune system are engaged in a deadly battle from the beginning. In the mid-1980s, while hard at work on AIDS research, Dr Ho was also working part-time at walk-in clinics to help support his family. Astute and observant, he paid attention to things that may have seemed trivial to other doctors and scientists at the time. He noticed that many gay men were coming down with unusually severe flu-like symptoms. Although they always recovered without showing any AIDS symptoms, he immediately drew a connection between the flu and AIDS. Could the flu be an early sign of HIV infection? This observation led to further research which culminated in the realization that HIV begins to replicate as soon as it enters the body, even if the patient does not show any symptoms for years.



This discovery had huge implications – it meant that doctors would have to completely change the way they treated AIDS patients. Instead of waiting until symptoms appeared, they would have to administer drugs as soon as they were infected.

Indeed, Dr Ho's many significant discoveries have changed the way we tackle the virus. Unfortunately, his uncanny ability to create such paradigm shifts has also earned him countless rivals. Some scientists were frustrated that their long-standing beliefs were being knocked



down, while some found it difficult to accept Dr Ho's claim that it may soon be possible to eliminate the virus completely from patients who were given the cocktail therapy soon after the infection, and accused him of being an attention-seeker. Other scientists were simply envious of his success, most notably after he was named TIME Magazine's Person of the Year in 1996.

Luckily, Dr Ho's positivity helped him deal with nasty comments made by scientists who were jealous of the recognition he gained from the title. Much to his credit, he has learnt not to take such hostility to heart, to rise above the bitterness and carry on with his work. Most importantly, he remains humble about his sudden rise to fame, explaining, "It was TIME that, in trying to recognize the achievements in the field, they typically do it through the story of one and I was the chosen one. I fully realize that it's symbolic for the progress made by the field."

Yet his modesty is inherently bound to an unwavering determination, a tireless perseverance, and plenty of hard work. This, I believe, is the best attribute of all. As he himself has stated, "To prevent corruption of praise is to keep on working". Despite his many discoveries, he has never once stopped or become complacent with his work. He is always out there, exploring new ways of targeting the virus, developing new classes of anti-HIV drugs and vaccines, always learning and always aiming for better.

Hopefully his story has inspired you, particularly those of you who are aspiring scientists and healthcare professionals. In his long, epic journey in search of the ultimate treatment and vaccine for AIDS, Dr. David Ho has demonstrated qualities which have made him the hugely successful scientist that he is. He has demonstrated resilience, limitless intellectual curiosity, endless

fascination with science, an overwhelming desire to help his patients, an optimistic outlook, relentless perseverance, a fair amount of ambition and an overriding passion for his work which enabled him to rise above the challenges he faced and placed him where he is today – at the forefront, a true role model we can and must seek to emulate.

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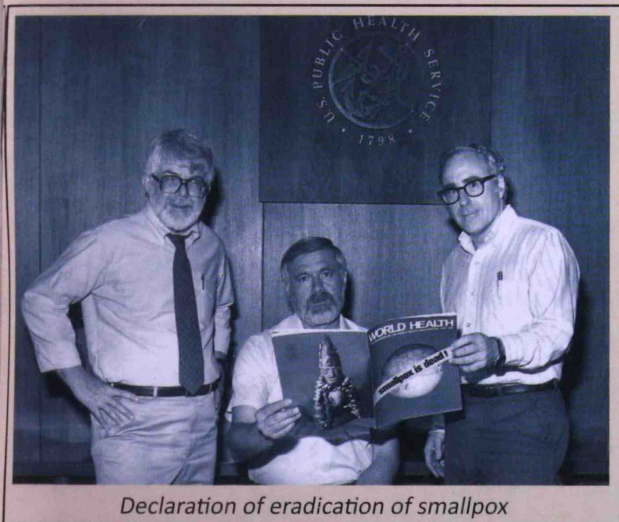
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*"Every step of the way there was a terrible disease and also a fascinating scientific challenge. Many of us want to help solve this mystery and at the same time solve this epidemic. That's what sustained us."*

## Tackling AIDS - Vaccine

Just a year after the World Health Assembly declared the eradication of smallpox on 8th May 1980, a new, mysterious disease, now known as Acquired Immunodeficiency Syndrome (AIDS), was first reported on 5th June 1981. After identifying the underlying causative agent as Human Immunodeficiency Virus (HIV), scientists at that time, following their victory against smallpox, were quite confident that they would be able to prevent the spread of AIDS using a similar tactic - vaccination. However, despite efforts being made and money being invested, as of today, the dream of eradicating another atrocious virus has yet to be realized, and cases of AIDS continue to appear at an alarming rate around the world. But why? We have vaccines for many viral diseases: polio, hepatitis B, influenza etc, but why are HIV vaccines just not available?



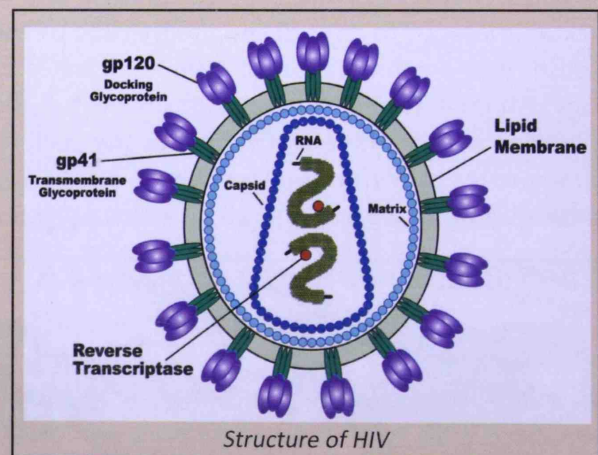
Declaration of eradication of smallpox

Vaccines work by triggering an immune response without letting people suffer from the primary infection. Simply speaking, vaccines help the body to develop antibodies, which can attach to the viruses and eventually destroy them. However, unlike other viruses, during the natural course of infection, HIV is seldom controlled by the immune system (less than 1% of the time) because the antibodies find it very difficult to bind to the virus. It seems that there are different types of shields made from glycoproteins that hinder the antibodies from binding to the target sites. Moreover, physics does not favour our defence mechanism either. Knowledge from thermodynamics predicts that molecules on the surface of the virus are moving around very rapidly,

consequently further hampering the action of antibodies. Therefore, even if a vaccine stimulates our immune system to develop antibodies for HIV, they are just ineffective in dealing with the virus.

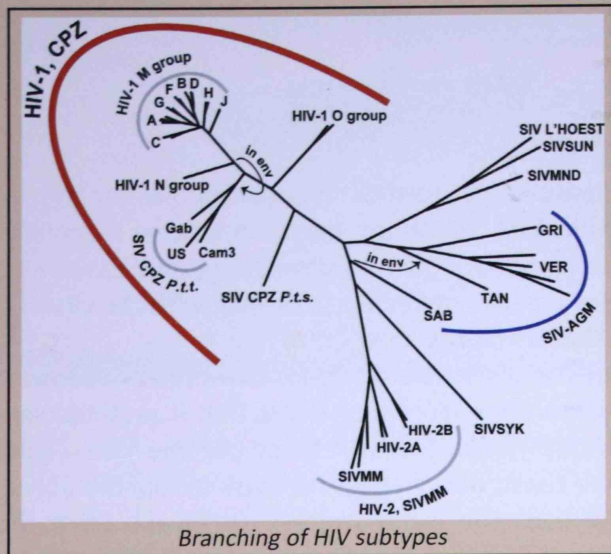
But the worst has yet to be mentioned. The most exasperating feature of HIV is that it mutates very quickly - more than  $10^7$  times per day. Like a thief who constantly changes his mask to fool the police, HIV uses the same strategy to escape from the immune system. Furthermore, the high mutation rate produces a population of HIV with incredible diversity. One type of HIV branches to several subtypes, and the branching continues. It is found that a person can be infected by a strand of HIV, give an immune response, and then become infected by another strand of HIV. Thus, we are not coping with just one virus, but multiple versions of them. How can we possibly develop a single vaccine that can deal with thousands of subtypes of HIV?

2.5 million new cases of HIV infections were reported



Structure of HIV

in 2007, of which 1.7 million of them occurred in the sub-Saharan Africa. 33.2 million people were living with the disease, and 2.1 million victims died from it in 2007. 'It (AIDS) is a silent tsunami that goes on day after day,' describes Dr. David Ho, a pioneer in AIDS research. This global epidemic has already killed more than 25 million people, and it must be stopped before it is too late. However, Dr. Ho predicts that HIV vaccines will not appear for many more years, due in part to the difficulties described above. It seems that when facing the war against



the development of resistance in HIV. As mentioned earlier, HIV mutates very quickly, which means that resistance develops very easily. Scientists used mathematical models to calculate the dosage of each individual drug to combine so as to maximize the therapeutic effect and minimize the emergence of resistance. However, such treatment costs US\$ 10,000 per patient per year. With such an expensive therapy, it is not surprising that the majority of AIDS patients, who are from developing countries, do not benefit a bit. Moreover, although patients taking HAART are temporarily shielded from death, they still face a host of symptoms from the disease and adverse side effects such as hepatitis, liver and renal failure or chronic fatigue syndrome, not to mention inconvenience and loss of productivity.

AIDS, human are just defenceless. Nevertheless, vaccination is not the only way to control the spread of AIDS. Are there any other effective means to prevent the spread of AIDS, such as promoting safe sex or other social measures? These possibilities will be discussed in the subsequent essays.

### More about ... treatment of AIDS

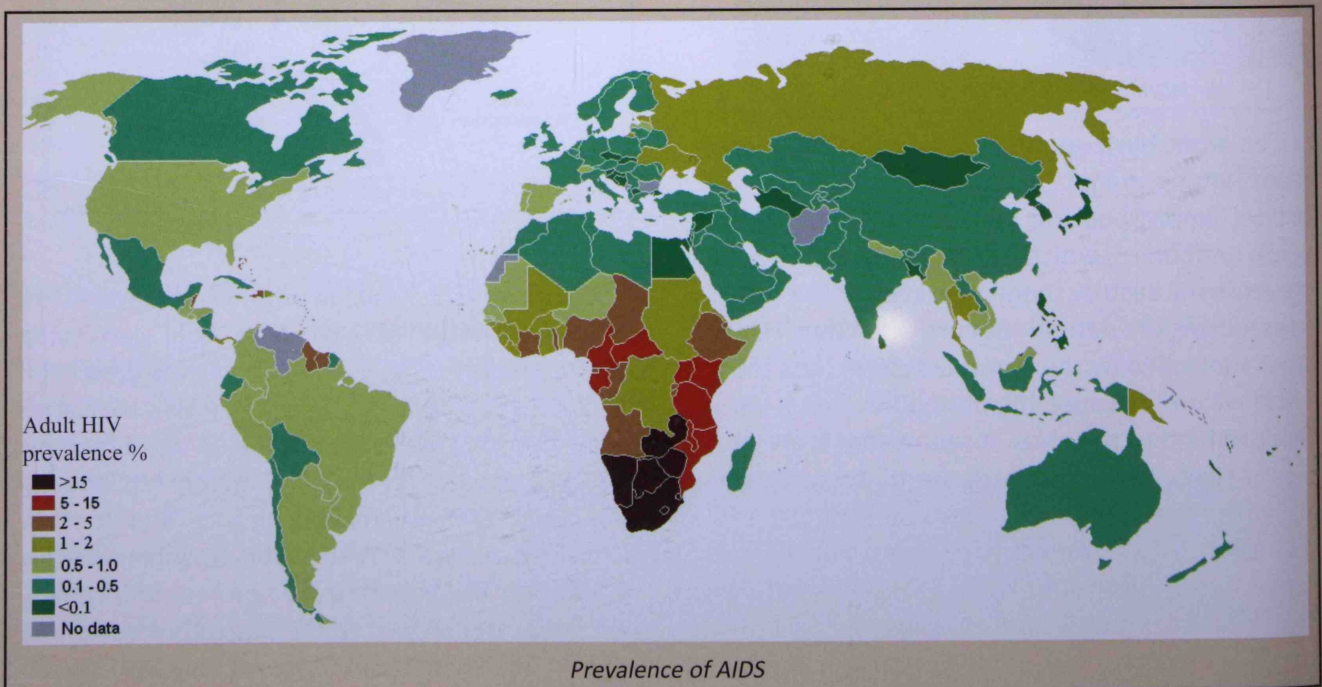
Although there is no cure for AIDS, scientists have developed a treatment called Highly Active Anti-retroviral Therapy (HAART), better known as the 'cocktail therapy', to control the progression of the disease. It is a combination of different classes of drugs that inhibits almost every step involved in the replication of HIV. The effectiveness of the cocktail therapy relies solely on the fact that several drugs are taken simultaneously, a strategy which prevents

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# A Systematic Inquiry Into The Nature Of The HIV/AIDS Pandemic And Its Containment *In Developed Countries*

**Disclaimer:** The arguments put forward in this essay are provocative and may be perceived as offensive and disturbing to some individuals. If you feel uncomfortable about reading a counter-intuitive account of the AIDS phenomenon, you are advised to stop here. The author and Caduceus bear no responsibility whatsoever for any emotional turmoil originating from this article. The author (an MBBS student) would further wish to clarify – in addition to the apparent fact that this represents his own opinion rather than that of Caduceus – that the nature of this article is purely academic, and not meant to be taken personally. Furthermore, as a doctor-to-be, he believes that all patients should be treated regardless of how they contracted a disease. Therefore, his proposals apply only on a public health rather than a doctor-patient level.

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## The object, method and scope of my inquiry:

In the previous article, the prevalence of HIV/AIDS and the lack of effective cure and vaccine were discussed. All of these factors combine to give a strong imperative for the government to adopt alternative measures to *contain* the infective agent. Verily, if society is incapable of eradicating a disease, it is most prudent to minimize the number of affected individuals.

The object of this essay, therefore, is to suggest methods to contain HIV, which, as I would argue, are both effective and moral. By effective I mean that the AIDS pandemic would be reduced to insignificance within a few decades after implementation of my policy; by moral I mean that the policy is formulated in accordance with the principles of liberalism. The scope of my argument is restricted to developed countries, especially western liberal democracies.

## Nipping HIV/AIDS in the bud

Although the *consistent and correct usage* of condoms is capable of reducing the risk of

infection by up to 80-90%, sexual contact remains accountable for the vast majority (75%) of all HIV infections.<sup>1</sup> Other significant modes of transmission include intravenous drug abuse (IVDA) (~10%) and hospitalization (5-10%). Since sexual contact and IVDA are the major means of transmission, I shall focus on their elimination in this essay.

## A disquieting suggestion from British criminal law

In 2000, a Briton named Feston Konzani was tested HIV-positive and educated on the risks and consequences of passing on the virus. Thereafter he had sex with three women without revealing his HIV status. He was sentenced to 10 years in prison as a result. The judge's reasoning, included in the footnote, was essentially as follows:<sup>2</sup> Rape is defined as sex without informed consent. If a person fails to inform his partner of his HIV status, it would not be possible for his partner to give a truly informed consent to sex. In other words, had the person revealed his HIV positive status, it is highly unlikely that his partner would have consented to the sex act, given that most people do not want to contract HIV<sup>3</sup>. Therefore, in the absence of vital information

on which an informed consent is based, consent is presumed not to be given. The sex act is thus non-consensual and should be deemed as rape. The fact whether the virus is transmitted from the rapist to the victim is only important in determining whether further charges are to be pressed on the rapist. For example, if the victim contracted HIV, developed AIDS and died as a result, the basic charge would be manslaughter since the rapist exhibited a wilful disregard for life. If it can be further proven that the rapist had the intention to inflict grievous harm or kill before intercourse, murder should be considered.

The above is what our criminal laws recommend in status quo. However, I believe that the law is insufficient in a number of ways. I venture to outline three major objections below:

Firstly, culpability involves foresight, and thus HIV carriers ignorant of their status cannot be incriminated under current law. A considerable amount of HIV transmission through sexual intercourse still remains legal.

Secondly, since ignorance presumes innocence, individuals with a high risk of contracting and transmitting AIDS will refuse to take HIV tests in order to avoid legal consequences. From a public health perspective, this is dangerous since these people are the ones most likely to spread the virus to other people. From a humanitarian perspective, we cannot treat these patients until they seek recourse from doctors – that is, if they choose to do so in the first place. Since early stages of AIDS are asymptomatic, patients would only go the doctor until late stages, when treatment is almost futile.

Thirdly, it can also be argued that the *deterrent* effect of current laws is insufficiently strong for potential AIDS rapists, i.e. the threat to (even lifelong) imprisonment is incapable of discouraging individuals with AIDS from rape and murder behaviour. To understand this concept, imagine yourself as a late-stage AIDS sufferer presented with an opportunity to sex. You understand that your partner would refuse to have sex if you tell her your seropositivity. You are thus faced with a choice: either commit rape by withholding your status, and get locked up for the rest of your life in a prison for your crime, or refuse the offer to have sex and die early nonetheless. Confronted with two equally undesirable prospects, there is little reason not to take your last chance. Rather, on the

contrary, the rape laws may in fact antagonize these individuals into engaging in as much unprotected sexual intercourse as much possible, or even into extremely harmful behaviour such as injecting their HIV-contaminated blood to pedestrians (as has happened in Shenzhen before). The three deficiencies outlined above prompts us to design more comprehensive measures to make sure that AIDS transmission does not occur.

### **A theoretical basis for mandatory testing and isolation of high risk individuals**

I am of opinion that a comprehensive solution – mandatory testing of HIV and isolation of high risk individuals – is advisable in light of the situations delineated above. In this session, I expound the theoretical basis of such proposals.

The objective of mandatory testing is to identify HIV carriers. Medically, early diagnosis allows for the provision of treatment to individuals who would otherwise be ignorant of their disease, so it is beneficial for the patient's health. Legally, mandatory testing eliminates the excuse of *ignorance* and increases the efficacy of rape and murder laws as explained previously. Socially, the fear for legal consequences would translate into a decrease in high risk behaviour for some HIV carriers.

An obvious difficulty in justifying the proposal is the objection of human rights. Normally, we all are entitled the right to movement, to participation in all sorts of activities that do not adversely affect others. However, if it can be proven that the exercise of the freedoms of some individuals *necessarily entail a threat to more important freedoms of other individuals through reckless HIV transmission*, under the liberal harm principle their rights can be limited. In the next session I shall attempt to draw distinctions between *normal carriers* who need not be isolated and *high risk carriers* who should be. However, following from that assumption, the contention now boils down to whether it is justifiable sufficient to deprive *high risk carriers* of their right to movement in order to further the right to life of others. My answer to that is an unequivocal yes.

I believe that the right to life is the most fundamental human right because it is most central to the experience of being human. If one cannot live, one cannot be considered human. It is the ultimate source from which all other rights are derived.



Without the right to life, one cannot exercise his rights to movement, to free speech, to political and religious freedoms, and a list of many other rights! Since the right to life is far more important than the right to movement, *the furtherance of a primary right through imitation of a secondary right is justified qualitatively. Quantitatively*, employing the principles of utilitarianism, i.e. defining maximum morality as maximum benefit to most people, isolation is both advantageous and proportionate since it protects the most fundamental right of the *numerical majority* by infringing only on the secondary right of a *numerical minority*. In calculating the maximum benefit of everyone in society, the net liberty and happiness of society is enhanced through the survival and well-being of the absolute majority.

By the same token, the right to privacy, a right further down in the hierarchy of rights, cannot possibly come before the right to life in society. It is most desirable that the government be granted the right to test HIV in all citizens, and the right to use that information for public health purposes.

### **Who to quarantine? Who to test? Why do we need to quarantine high risk carriers?**

Who then, are these mysterious 'high risk carriers' that deserve isolation? My previous definition included *all seropositive individuals who exhibit a tendency to pass on the virus recklessly*. Before I begin, I must clarify that I do not intend to provide an exhaustive criteria here – to do so I would have to abandon studying medicine for research and take a few volumes of *Caduceus* to complete it. What I aim to bring out here, rather, is the *importance* and *possibility* of drawing this important distinction. The criteria I am laying out is essential only in preserving the liberty of *low risk carriers*, who would otherwise be needlessly quarantined in a blanket policy. In a sense, my criteria resemble prognostic indicators predicting the likely behaviour of patients – rather than the likely development of pathological conditions – based on multiple factors.

As mentioned from the outset of the essay, AIDS is spread mostly through sexual intercourse and sharing of needles in intravenous drug abuse (IVDA). HIV carriers who exhibit a tendency to continue their sexual activity and/or needle-sharing habits are high risk carriers. Under this proposal, therefore, the poor child who contracted AIDS from

his mother need not be quarantined because he is incapable of engaging into sexual activity nor has he shown a tendency to recklessly pass his virus to others. The same goes to the hapless fellow who was syringe-attacked in Shenzhen. There is no benefit gained from locking them up in a sanatorium since they do not pose harm to society, which forms the theoretical basis of the isolation.

The next step is to analyze different social groups' attitude on sex and drugs. The key assumption here is that people act according to their beliefs and their behaviour reflect on the material world. I should emphasize that the bulk of my analysis is objective in the sense that I do not intend to impose value judgment on any political ideology or social group. Nevertheless, when we analyze society's attitude towards sex and intravenous drug abuse – the two main ways of HIV transmission – we find that people's attitude tend to be polarized as follows:

On one hand a group of individuals ardently uphold the principle that the reciprocal use of sexual organs is acceptable only in the context of marriage, which they define as a union between a man and woman. These individuals are often branded as 'conservatives'. Conservatives are traditionally against all forms of drug abuse, including IVDA, and homosexuality is anathema because they are at variance with their marital ideals. Their definition of sex is coital for procreative purposes, so paraphilia including sodomy is considered aberrant and harmful. Epidemiologically, they are by far less prone to contract AIDS since they engage in long-term heterosexual relationships and tend to be faithful to their partners. Very often, the only sexual partner a conservative has is another conservative (his wife/her husband), who too has no sexual activity outside marriage. These one-to-one relationships effectively forestall HIV encroachment.

On the other hand are a group of individuals who fervently align to John Stuart Mill's harm principle, namely, that all actions posing no demonstrable harm to third parties ought to be allowed. These individuals are stereotyped as 'liberals'. Liberals strongly believe in the freedom to sexual activity between any two individuals as long as it is consensual. By this token sex is no longer confined within marriage, and in many instances it can be recreative as well as procreative. It is acceptable for liberals to have multiple sexual partners and be gay. Moreover, many liberals argue that marijuana (some

even argue for the legalization of *all drugs* including heroin, meth and many) ought to be legalized since some individuals derive pleasure from it while not posing demonstrable harm to others.

Now, setting the feud between 'liberals' and 'conservatives' aside, let us suspend our value judgment as to which system is superior to the other and reason from a purely medical perspective. Irrefutable evidence point to the fact that promiscuity, gay sex (anal intercourse) and IVDA predispose to HIV infection.<sup>4</sup> In fact, they are risk factors just as smoking is a risk factor for lung cancer. Generically, being liberal about sex and drugs is a risk factor to HIV infection. Of course, within liberals, there further exist subgroups that are particularly prone to contracting HIV, just as there are other subgroups that believe in the right to consensual sexual intercourse while not practicing it actively. These include prostitutes, whose profession require having sex with multiple clients, and homosexuals, whose predominant mode of sex intrinsically entail a higher risk of condom rupture and thus HIV transmission. Of course, there will be prostitute customers who, by virtue of having more sexual partners, are entitled to a higher risk of contracting HIV. Again, I am not hinting that such behaviour is morally reprehensible or otherwise, but merely stating a value-free statistic. If there is no change in belief in these HIV patients, the continual exercise of risk factors translate into prognostic indicators of behaviour. As of now, I have identified *belief on social issues, occupation and sexual orientation* as such indicators.

The point that I am going to make here is most central to my case for isolation. After narrowing my target to liberal subgroups who statistically engage in high risk behaviour, I now provide a theoretical explanation of *why these groups would continue to engage in high risk behaviour even after HIV infection*. This requires a further examination of the liberal assumption that *rational men always act in their self interest*. This idea was first proposed by eminent philosopher Jeremy Bentham and further elaborated by ethicists like Ayn Rand and economists like Adam Smith. The importance of this assumption cannot be underestimated. Free market economics, democracy, and liberalism all base on this assumption. In short, the fundamental reason why human beings should be free to engage in all sorts of social, political and economic activity that do not harm others (the harm principle) is because

they know what is best and rationally choose the most rewarding option for themselves. This doctrine is antithetical to *paternalism*, which argued for the frailty of human reason, the corruption of human nature and the logical corollary of the importance of *state intervention*. In economics, the doctrine translates to the *homo economicus assumption*, which tells us, for example, if an apple costs 10 dollars in shop A and 5 dollars in shop B, *ceteris paribus*, we are naturally inclined to purchase it in shop B, and this assumption forms the basis of microeconomics. In social activity, it translates to the *felicific calculus*, which tells us, for example, if activity A entails 10 units of pleasure while activity B entails only 5, *ceteris paribus*, we will perform A. In politics, it translates into *democracy*, which tells us, for example, if voting party A confers you 10 units of benefit, while voting party B gives you 5, you would vote for A, so when all votes are cast, the party that gives most benefits to most people is elected and the objective political interest of society-at-large is maximized.

As indicated from the outset of the essay, my solution only seeks to be moral under liberal principles. Therefore, I take the maxim that 'A good liberal always acts rationally for his maximum self interest' as an assumption. Applied to the AIDS situation, we can estimate with certain accuracy, from the beliefs HIV carrier hold and exhibit through past conduct, his tendency to transmit the virus to other individuals. **If a person exhibits past behaviour indicating an appetite for sex or IVDA, and fails to show that he is capable of curbing that appetite after his infection, he should be considered a high risk carrier.** When put into the context of liberalism, it is easy to understand the rationale behind this. A liberal HIV carrier is a liberal, and thus he always acts rationally in his self interest. A liberal non-HIV carrier is also a liberal, and thus she always acts rationally in her self interest. The reason why I do not include conservatives in my analysis is because they do not usually have sex except with their wives/husbands, as explained above.

Because a non-HIV carrier liberal acts rationally in her self interest, very often she is reluctant to have sex with HIV carriers since it entails a risk of exposure to the virus, which, in turn, may cause AIDS, which, in turn, leads to death, which, in turn, is not in her self interest.

On the other hand, a liberal HIV carrier acts

rationality in her self interest, so he wishes to have sex. As explained above, he has no moral qualms against having sex with multiple partners as long as he derives pleasure from that act. Whether his partner catches the virus is of little relevance, since it does not diminish the enjoyment he extracts from the act of sex itself. He understands, however, that others are reluctant to have sex with him for fear of catching AIDS. Therefore, since by classification he cannot curb his desire to have sex, *he always tends to withhold/deny his HIV-positive status from his sexual partners in order to reach his objective, namely, to have sex.* It is in this process that *high risk carriers* invariably pose an unlimited threat to the right to life of other individuals – because they have no means to, thus invariably fail obtain informed consent in sex, which, as I have explained in the first session, amounts to rape under liberal positivist law. Now under mandatory testing every HIV carrier is assumed to know of his HIV status, so he would be culpable of rape if he did conceal his status. In order not to be incarcerated through indictment of rape, their incentive to hide their status is further augmented. In reality, after implementation of mandatory testing almost all HIV transmission through sexual intercourse will happen to fall into this case, because, as I have just shown, nobody wishes to have sex with HIV carriers, so the element of deception is required for the sex act to happen.

### Type I and Type II errors

I have thus far developed a rudimentary method of identification of high risk carriers based on political and moral beliefs, occupation, sexual orientation, past behaviour and lifestyle, and I concede that more of such criteria can be devised with the aid of disciplines like behavioural psychology and statistics. All said, however, in the process of classification, error is inevitable and they tend to fall into two categories. Type I error occurs when low risk carriers are categorized as high risk carriers, while type II error occurs when high risk carriers are falsely assessed as low risk carriers, and thus allowed to roam free with impunity.

Traditionally, in law, Type I errors (finding an innocent suspect guilty) are considered *twice as bad* as Type II errors (a guilty suspect found innocent). This is because Type I errors allow one guilty person to escape from justice and subject one innocent person to injustice simultaneously while Type II errors only include one incidence of injustice. It was

argued, therefore, quantitatively, Type I errors are worse. This standard leads to the legal maxim of the presumption of innocence. In the adversarial system of law, prosecutors have to prove beyond reasonable doubt the culpability of the suspect in order to achieve a positive verdict.

However, in the containment of infectious disease, the method adopted is very different. Type II errors are considered more acceptable than Type I errors because of the *infective* nature of the disease. If we allow even a handful of carriers to interact with the population, the disease will spread extensively and adversely affect multiple individuals at an exponential rate. Therefore, it is beneficial even to isolate individuals whose seropositivity we are unsure of than to let them go around to spread the bug. One example near home is the quarantine of more than a hundred Amoy Garden residents in the SARS period – we do not know whether they have SARS or not, but in our absence of knowledge we *assume* they have it and thus quarantine them for the sake of society. It is in this way that rapid control over SARS is achieved.

Under this standard, it follows that we should by default quarantine patients tested HIV positive until it can be proven *beyond reasonable doubt*, by methods partially laid out above, that they would not infect others. As I have conceded, we can only predict to a certain level of statistical confidence the expected behaviour of HIV carriers, meaning that some carriers who may not spread the disease would be isolated. This, however, is a necessary evil that we must accept, just as we accept that some innocent people are imprisoned in our criminal law system in order to achieve a greater good. That error is possible does not translate into an obstacle for action. In political theory, it can be argued that the risk of suffering a miscarriage in justice is accepted, alongside with other forfeiture of rights, by the citizenry through an implicit *social contract*. I cannot afford to go into detailed explanation here but I must emphasize that this principle is especially important in containing AIDS. HIV/AIDS is unique among important infectious diseases in that no cure has been found and that the virus is constantly evolving and becoming increasingly drug resistant. A few weeks ago, on 12<sup>th</sup> of March, 2009, a strain of HIV that is highly resistant to virtually all anti-retroviral drugs and leads to rapid onset of AIDS was detected in New York City, the United States of America.<sup>5</sup> This further highlights the urgency of the

situation and compels us to action. As I will explain in the next two sections, the public health aspect of AIDS is often concealed by unhelpful politicization—a phenomenon known as AIDS exceptionalism—and the results have been dire. Unlike SARS and Avian flu that are nipped in the bud through aggressive public health measures, HIV/AIDS escalated into a global phenomenon affecting millions of people, causing widespread suffering and despair all over the globe. Socialist Cuba shows how a value-free control of AIDS can be successful.

### **Does quarantine work? Or should we stick to condoms?**

In 1986, Cuba instituted the world's only quarantine policy for all HIV carriers following mandatory testing. By 1993, 12 million tests have been conducted in its 11 million citizens. HIV carriers are confined in rural sanatoriums where adequate housing, better than average nutrition, sports facilities and medical care are provided.<sup>6</sup> The efficacy of the policy is astounding. By 1993, there have been 35 times more deaths from AIDS in the USA than in Cuba *per head*. As for incidence, the USA had 276 new cases per million people as opposed to the 7 in Cuba.<sup>7</sup> Essentially, by 1993, the HIV virus has disappeared from the average Cuban's daily life and there was massive relief and public commendation for the government's prophetic insights.

Year 1994 saw a reverse of these tendencies when Cuban authorities lifted the quarantine.<sup>8</sup> As of 2003, half of the HIV positive Cubans are roaming free in Cuban streets. Compounded with factors such as an increasingly prominent sex trade, in 1997 the Cuban health ministry announced that the HIV infection rate was rising.

The impressive correlation between the policy and HIV infection rates speak of the stunning efficacy of quarantine. The causative effect of the policy is corroborated by the established public health principle on isolating the pathogen from susceptible hosts: If all HIV carriers are isolated and placed under monitoring, no transmission to non-carriers is possible.

Many a time the containment of AIDS in the west have been plagued by political correctness and mundane assertions on human rights. As Stephen Joseph, former Commissioner of Public health for New York City noted, 'We came to think of AIDS as

fundamentally a crisis in human rights that had some public health dimensions, rather than as a crisis in public health that had some important human rights dimensions'. Eminent medical anthropologist Dr. N Scheper-Hughes lamented that 'the morass of repetitive, pious liturgies about stigma, blaming, and difference [...] conceal a collective denial of the impact of AIDS. While all of us can learn to overcome (or at least deal with) stigma and social exclusion, few can beat the virus itself'. The consequences, as she recounted, were immense: 'In the US blood screening was delayed because of the implications of asking donors to identify sexual practices and drug habits; HIV testing was not added to the work-up of every newly admitted hospital patient [...]. The prevailing view is that to demand testing and partner notification would be to treat HIV-positive individuals like criminals, and that education is the best, indeed the only, acceptable response. [...] The refusal to recognize that there were real "risk groups" meant that public health and educational resources were spread impossibly thinly.' In retrospect, she concluded that 'a more aggressive public health response at the very start of the epidemic might have saved countless lives.

### **The case of Hong Kong**

Hong Kong has a distinguished tradition and reputation for its decisiveness in containing infectious disease. The government is often capable of executing effective policies that require Herculean political will – and thus not possible in other places – for reasons out of the scope of this article. For example, in 1997, when the then-unknown H5N1 Avian flu infected 18 individuals, the government embarked on an aggressive campaign to cull all chickens in wet markets. It also began to devise a policy of central slaughtering which would effectively obliterate the local poultry industry, amidst understandable opposition from practitioners. In the 2003 SARS outbreak, the government also acted with steely determination in quarantining the residents in Amoy Gardens which effectively prevented the spread of the deadly pathogen. The efficiency of the Hong Kong government was greeted with praise by the international community. As a result of this success, the SARS outbreak was contained and in the end only 299 unfortunate patients died.

It is time that the government adopted the same standards on HIV/AIDS. To begin with, the prevalence rate in Hong Kong, albeit low compared to other

developed countries, is increasing as a new high of 435 cases was recorded last year.<sup>10</sup> Education has thus far proved futile as the number of new cases steadily climb up through the years. Every year hundreds of citizens unwittingly contract the virus and are consigned to a life of eternal misery and premature death because of the lack of effective containment. As explained above, quarantine is a liberal, moral and effective measure. It is *the* policy our government should take.

The sheer indifferentism displayed by the media when 435 cases of HIV were recorded last year, in contrast to the massive public outrage in the SARS and Avian Flu incidents, only highlights how society is misguided into holding a set of double standards. If we are truly concerned with the collective welfare of the general public, we must abandon our misconstrued prejudices and adopt appropriate action before more people, not chicken, are sent to the slaughter under merciless guillotine of the HIV.

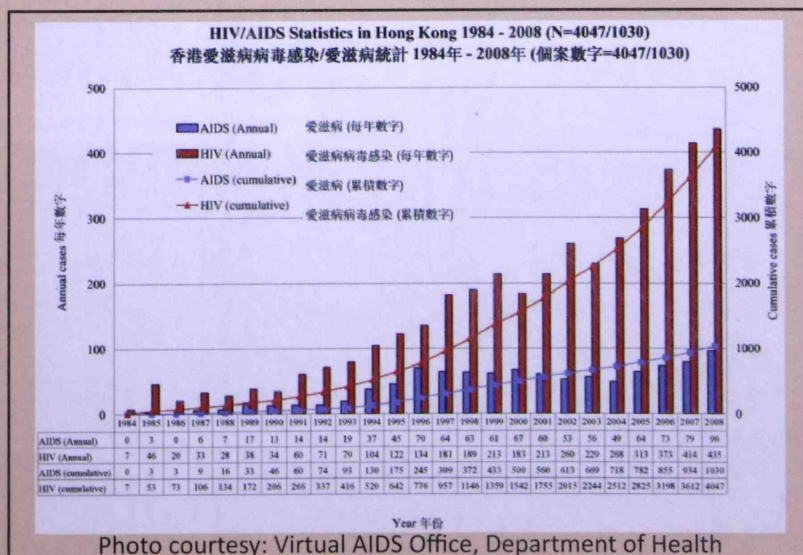
### Equity in resource allocation and democracy

Not only does AIDS pose a threat to our fundamental *human* right to life, it also transgresses upon many of our *civil* rights. Research for AIDS is expensive and hundreds of billions of dollars have already been poured into the search for a cure. Prolonging the life of AIDS patients using recent inventions is also incredibly expensive. A year of HAART costs from USD 12000 to 24000 (~HKD 96000 - 192,000)<sup>11</sup>, and this is one reason why AIDS patients from the lower social strata are often denied treatment. The unique nature of antiretroviral medication is that it requires constant updating since the virus is rapidly mutating, and this means that the price would

remain high unlike other drugs. All these problems inevitably lead to consideration about equity in resource distribution and our current situation is highly worrisome. Dr Richard Darling, founder of the FAIR foundation, monitored the amount of money spent in research of different diseases that are the major causes of death in America, including COPD, hepatitis, heart disease and diabetes. A stunning inequality in the distribution of research funding was observed, as shown in the chart below. The amount of money spent per death on AIDS is three times as much as the money spent on COPD, Hepatitis B&C, CVD, DM, Prostate disease, Alzheimers and Parkinson's *combined*, when these diseases are by far more prevalent than AIDS. In the words of US House Representative Ernest Istook, "If you have the politically correct disease, the prospect of getting federal funding to help find the cure are 100 times greater than if you have some other disease, even though it may be much more common."<sup>12</sup>

The imbalance in funding for research is particularly striking<sup>13</sup> in light of the fact that the primary risk factors for contracting AIDS are voluntary behaviour – sexual contact and IVDA– that are already well known and thus completely preventable. In stark contrast, the aetiology and pathology of other important diseases remain unknown, thus these diseases are unpreventable. Still they don't deserve as much funding as AIDS. How is that fair?

The inequality also reflects on the amount of attention given to different diseases by the media. You may have noticed the overwhelming number of advertisements seen on public transport, trying to raise concern for AIDS patients (to be discussed in the subsequent section). Such organizations have even invited HIV carriers to share their misfortune



and experience of living with a stigmatized illness with medical students. Has there been anything of the sort calling for attention and care for COPD patients? No. The reason for this inequality is easily explained. Patients with diseases like COPD and Parkinson's are highly debilitated and thus unable to attract others' attention, while early-stage AIDS patients or asymptomatic HIV carriers are less debilitated and thus capable of fighting for their subjective political interest. Moreover, since a considerable portion of HIV/AIDS patients are homosexuals, 'gay rights' groups, commanding huge economic and political influence in society, are able to lobby for an increased funding for the diseases their comrades suffer from. These organizations have a distinguished history of initiating militant protests and self-victimization that appeal to the public for sympathy, and they also have the capital to complain of discrimination or stigmatization.

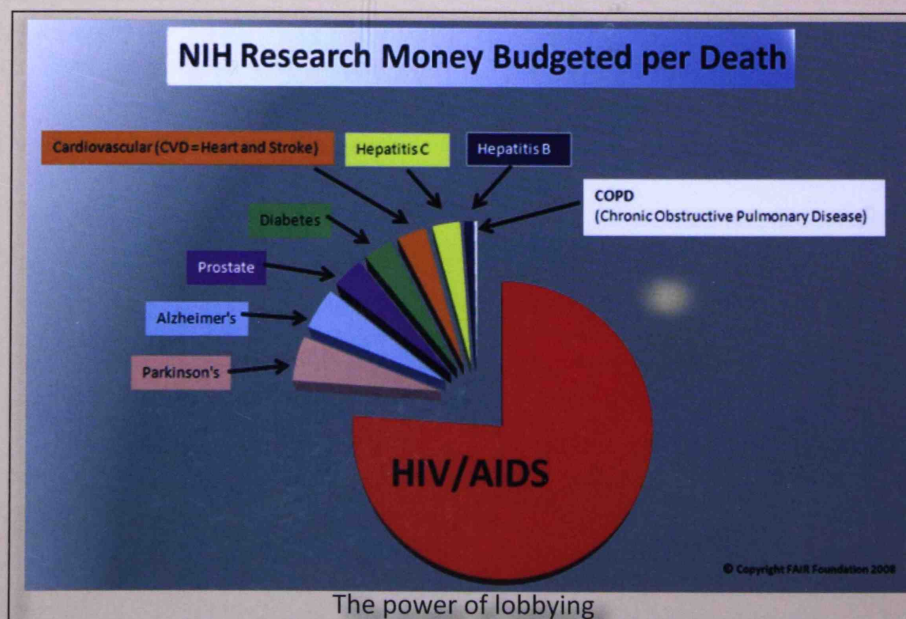
It is time that we removed these undue influences. To start with, this distribution is in direct contradiction with the principles of equity, which state that the most needed should be allocated the most resources. The efficient allocation of resources that ensure a maximum benefit to society is not achieved. More prevalent and debilitating diseases receive less attention and funding than less prevalent diseases suffered by a selected few.

Secondly, this distribution is highly anti-democratic. In an ideal democracy, different parties vote for their interest and therefore, overall, the resources distributed correspond to different numerical portions of the constituents of society. In practical democracy, the elected government

is given a mandate by all citizens to cater for the needs of different parties within the electorate *proportionately*, achieving a similar distribution as theorized in an ideal republican democracy. In this way, the *maximum objective political interest* of society-as-a-whole is achieved. However, if certain *minority* interest groups are capable of coercing the government into allocating resources reserved for the *majority* to them, democracy fails. **In such societies those who have the loudest voices and pursue the most violent means get what they want.** The effects of this are twofold. On one hand, citizens are discouraged from resolving conflicts peacefully through legitimate political processes, e.g. voting. On the other hand, they are tempted to extort their government through extralegal means like protests, bribery and lobbying. Needless to say, this is harmful to the political order of any given society.

Furthermore I do not believe that thirty years of failure in research is a good reason for continuation. Although advancements have been made in recent years, the goal of developing a complete cure has failed abysmally, and there are no signs of success thus far. It is time to let the researchers on DM, Hepatitis or Parkinson's have their go.

Finally, the current distribution of research money is unethical because it runs against the principle of necessity. After all, AIDS is an *infective* disease and as the author has argued there are alternative methods to minimize the harmful effects of it based on *containment*, so there is no *absolute necessity* for research to succeed. However, many diseases like DM and cancer cannot be resolved through isolation



of the infective agent thus there exists no alternative but for research into medical interventions for prevention and treatment to succeed. As shown in the Cuban example, the costs of isolation are low in comparison to the huge R&D funding, and therefore economically speaking, isolation is expedient.

In this section the author has conclusively demonstrated that the existing resource allocation is unfair, inefficient and anti-democratic, and must be summarily rejected by the rational public.

### A short note on 'stigma' and relevant interest groups

Recently, it has come to my attention that certain 'AIDS care groups' have launched aggressive public relations campaigns peddling the argument that we must 'isolate the virus, but not the patients'. Following from this dogma any sort of different attitude exhibited towards HIV carriers must be condemned. For example, a decreased amount and intimacy of contact between a child and his father who recently contracted AIDS is considered *discrimination*. A woman who refuses to marry, or engage in sexual activity with a man *solely because of his HIV status* is branded as *discriminatory*. I am in tears to report that these assertions, after repeated conditioning and propaganda, are now held by members of the general public as monolithic truth.

In good faith, therefore, I run the risk of being called ugly names, or even persecuted, to draw your attention to the perils of this blatant abuse of 'discrimination' and misguided dogooderism. Discrimination is the assignment of *unfounded* prejudices to social groups. For example, if I am a boss and I refuse to hire blacks/females/the handicapped etc. because of race/gender/disability etc. - *their innate characteristics despite of their ability to work*, I am discriminating against these groups. A different attitude held towards HIV positive individuals, however, is not discrimination. It is a proven health hazard to have sex with HIV positive individuals, so if I refuse to marry a HIV carrier because it entails the health hazard of having sex, I am merely trying to lead a healthy life but the AIDS lobby group would have you believe that this is morally bad (see poster) that you should be ashamed of. 'Discrimination' here, therefore, becomes a useless concept merely designed to promote interests of HIV carriers without regard for the interest of others, and from experience the

consequences of such tactics can be grave.

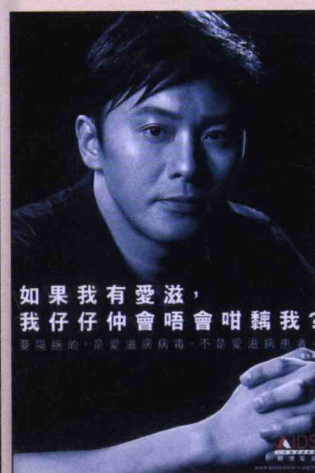
A few decades ago the HIV/AIDS lobby was the loudest vocal proponent of 'safe sex' – the misnomer of 'sex with condoms' which created the false impression among the public that it is absolutely safe to have sex with HIV/STD carriers. However, as has been mentioned previously, *even the correct and consistent usage of condoms can only reduce the risk of HIV infection by 80-90%*. In other words, if one uses it properly for 100 times – a possibility I doubt in the first place – one would still be exposed to the virus for about 10-20 times. For me, that doesn't sound safe at all. But, alas, the power of propaganda and indoctrination, the singular catchphrase of 'safe sex', were able to create such a misconception among the general public. This has likely contributed to the increase in AIDS cases in the past few decades. Now the AIDS lobby is calling for unlimited intimacy with HIV carriers, so that more can join their big family. Enough, I say! Do I not even have a right to protect myself from a virus?

Q: If I have AIDS, would my children still love me?

A: They would - except that you cheated on their mother/did drugs, infected her with a deadly virus, and probably left them orphaned. It is lovely to sloganeer, but rational argument tends to reveal a somewhat more nuanced picture of the situation. Small font: Isolate the virus, not the patient!!!

A: Pray tell, how is that biologically possible?

Q: Can I still get a decent wife if I have AIDS?



(A: If 'decent' means HIV-negative, probably not. After all, nobody wants to get HIV, develop AIDS and die. And don't even start whining about discrimination. It is not.)

## Recapitulation and Conclusion

In the beginning of the essay, I argued that the virulence of HIV virus, the prevalence of AIDS and the current lack of cure form an urgent task for policy makers to devise measures to contain the infective agent. Part one of the essay saw the application and limits of contemporary criminal law, including precedents from foreign countries, to the AIDS question. Part two follows up by proposing more comprehensive policies – mandatory testing and isolation – to solve the problem. It is substantiated theoretically based on the liberal harm principle and hierarchy of rights and empirically by the successful example of Cuba. Part three consists of an in-depth analysis on AIDS economics and politics and deals with other important topics on AIDS such as resource distribution, democracy and 'stigma'. Throughout the essay I have attempted to offer an alternative perspective on the nature of the AIDS phenomenon. My intention is to minimize the suffering caused by AIDS through minimizing the number of people infected. The ideas offered, however, are not only informative, but also performative, and can be realized in the material world through political action. In summary, two paths lie in front of us: Either we acquiesce in the gross injustices committed in front of us on a daily basis under the shameful fronts of indifferentism and sensationalism, or we uphold justice by adopting measures that substantively bring greater benefits to society. I leave that to the reader to decide.

1 USAID: [http://www.usaid.gov/our\\_work/global\\_health/aids/TechAreas/prevention/condomfactsheet.html](http://www.usaid.gov/our_work/global_health/aids/TechAreas/prevention/condomfactsheet.html).

2 "In the public interest, so far as possible, the spread of catastrophic illness must be avoided or prevented. On the other hand, the public interest also requires that the principle of personal autonomy in the context of adult non-violent sexual relationships be maintained. If an individual who knows that he is suffering from HIV conceals this stark fact from his sexual partner, the principle of her personal autonomy is not enhanced if he is exculpated when he recklessly transmits HIV to her through consensual sexual intercourse. On any view, the concealment of this fact from her almost inevitably means that she is deceived. Her consent is not properly informed, and she cannot give an informed consent to something of which she is ignorant. Equally, her personal autonomy is not normally protected by allowing a defendant who knows that he is suffering from the HIV virus which he deliberately conceals, to assert an honest belief in his partner's informed consent to the risk of the transmission of the HIV virus. Silence in these circumstances is incongruous with honesty, or with a genuine belief that there is an informed consent. Accordingly, in such circumstances the issue either of informed consent, or honest belief in it will only rarely arise: in reality, in most

cases, the contention would be wholly artificial." - Paragraph 42, Judgement in the Court of Appeal for case R v. Konzani, EWCA Crim 706

3 One notable exception is the 'bugchasing-giftgiving' practice in LGBT subculture. In this procedure, gay 'bugchasers' seek sexual partners who are HIV positive with the intention of having unprotected sex and sero-converting. 'Giftgivers' are the HIV positive men who comply with the bugchaser's wishes and generously donate (usually for free) their viruses to the bugchaser. However, this practice is not prevalent and only accounts for a minority of HIV infections.

4 Mayo Clinic, <http://www.mayoclinic.com/health/hiv-aids/DS00005/DSECTION=risk-factors>

5 'The virus was found in a man of mid-40s who had sex with hundreds of partners, and was not identified by officials in order to protect his privacy. Dr David Ho, who did the testing that identified the rare strain, described it as 'a scary phenomenon' from New York Times, <http://www.nytimes.com/2005/02/12/health/12aids.htm>

6 Cuba's Response to the HIV Epidemic, E.J. P-Stable, M.D., American Journal of Public Health May 1991, Vol. 81, No.5

7 Assessing Cuba's approach to contain AIDS and HVI, C. Burr, The Lancet Vol. 350, August 30, 1997

8 HIV and quarantine in Cuba, Hansen and Groce, JAMA 2003;290:2875

9 AIDS, public health, and human rights in Cuba, N. S.-Hughes, The Lancet Vol. 342, October 16, 1993

10 Virtual AIDS Office, Health Department, HK Government <http://www.info.gov.hk/aids/english/press/2009/090303.htm>

11 <http://www.thebody.com/Forums/AIDS/Starting/Current/Q140963.html>

12 <http://www.actupny.org/alert/2020.html>

13 Comparison between research funding in major diseases (adopted from FAIR foundation website):

\* Breast Cancer: With 180,000 new cases each year, breast cancer is the leading cause of death among American women who are 40-55 years of age. Each year about 46,000 women die of the disease. The NIH is currently spending \$396 million on breast cancer research-or \$8,608 per death from breast cancer.

\* Diabetes: According to the Centers for Disease Control and Prevention, 7 million Americans have diabetes-the sixth leading cause of death in the United States. In 1999 64,751 people died from complications associated with diabetes. The NIH has budgeted \$450 million for diabetes research-or \$6,949 per death from diabetes.

Despite the fact that since 1998 AIDS has not been on the list of the top 15 causes of death in America, the current NIH AIDS research budget amounts to an astounding \$164,000 per AIDS death. This figure does not include the public monies spent to treat AIDS through the federal Ryan White Comprehensive AIDS Resources (CARE) Act. Funding for CARE is currently \$1.8 billion.



## AIDS And Condoms: The Ongoing Saga

Condoms are widely promoted as a major weapon against the spread of AIDS. Is this truly logical and how well does the evidence support this view?

Condoms have been promoted to limit the spread of AIDS in Africa for some time, but the epidemic does not seem to have been effectively checked except for the special case of Uganda, which alone showed a drop in AIDS prevalence from 18% in 1992 to 5% in 2001. Their special weapon is their ABC programme – “Abstain-Be faithful-Condoms”. This combination of behavioural modification as the bread and butter of the scheme with condoms as a backup succeeded where condoms alone failed, begging the question of the contribution of condoms in their success. It is also noteworthy that not only were condoms used as a backup for the failure of lifestyle change - the strategy was only targeted at sex workers in Uganda.

Closer to home, a comparison of the experiences of Thailand and the Philippines also shows the failure of condoms in preventing the spread of AIDS. Both countries recorded their first AIDS case in 1984, and had accumulated 112 and 135 cases respectively in 1987, in the space of three years. The WHO predicted in 1991 that Thailand would record a total of around 70,000 cases in 1999, whilst the figure for the Philippines was 80,000 based on their respective populations.

Both countries then embarked on condom promotion campaigns, although the Catholic Church in the Philippines responded with an abstinence-based program two years later. In 1999, Thailand had exceeded the WHO estimate by 10 times with 780,000 cases of HIV/AIDS in total, whilst the corresponding figure for the Philippines was only a few thousand. This trend continued well into the 21st Century. By the end of 2005, Thailand had accumulated over 1.2 million cases of HIV/AIDS, whereas the Philippines only had around 12,000 cases.

These figures show that the spread of HIV/AIDS can be achieved without the promotion of condoms and that use of condoms is not only less effective as previously thought, but may even exacerbate the spread. One possible explanation would be risk

compensation, by which we mean that those who had taken protective measures increased their exposure to the risk of contracting AIDS by increasing the frequency of risky sexual encounters.

If we look at the handling of infectious diseases in Hong Kong, the condom campaign then seems even less tenable. The Government eliminated the reservoir of avian flu viruses by culling chickens in huge numbers several times within the last few years. In the case of SARS, isolation was a major weapon in the arsenal that led to our triumph over the disease. Furthermore, the implementation of hygiene measures, import restrictions and the proposal for central slaughtering of poultry, which will effectively be the coup de grâce to the live poultry trade, are also variations on the theme of separating pathogens from susceptible hosts. Surely restricting contact between infected and susceptible individuals is an established public health measure in tackling infectious diseases. Is sex so special that it must be treated differently, even in the case of sexually transmitted infections? Perhaps the time is now ripe for a re-examination of the role that condoms have played in reducing the spread of HIV/AIDS.

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AIDS

# East Asian Medical Students' Conference

Kuala Lumpur, Malaysia



## Asian Medical Students' Association Hong Kong

*Last seen at the Hong Kong International Airport – a group of medical students, bleary-eyed but bubbling with enthusiasm, proudly unfurling a banner with the words "Asian Medical Students' Association Hong Kong" for a quick group photo before disappearing into the South Gate, headed for the 22<sup>nd</sup> East Asian Medical Students' Conference (EAMSC) in Kuala Lumpur, Malaysia.*

As the world stepped into 2009, the executive committee members of AMSA HK were busy preparing for the upcoming 22<sup>nd</sup> East Asian Medical Students' Conference (EAMSC). The Hong Kong delegation joined over 280 other medical students from 16 countries at the beautiful Monash University Sunway Campus in Kuala Lumpur.



Apart from building deeper bonds within our own team, we also made full use of the opportunity to mix, interact, and make friends with Mongolians, Koreans and Cambodians, to name but a few.

### "Selamat Datang"

• "Besides learning to say hello in Malay, I was also trained in pronouncing names! Once, I forgot someone's name and surreptitiously snuck a peek at his nametag, only to be confronted with a mass of letters - 'Mandakhnaran Davaadorj'. As I stood there bewildered, he grinned and shook my hand. 'My name's Manda,' he said, and I breathed a sigh of relief."

- Denise So

### Academic Experience

The theme for this year's conference was "Engaging Asia-Pacific Youth in the Fight Against HIV/AIDS", and our Academic Team's hard work paid off when our academic paper was shortlisted, giving us the opportunity to share our research on the situation of HIV/AIDS in Hong Kong with other delegates.

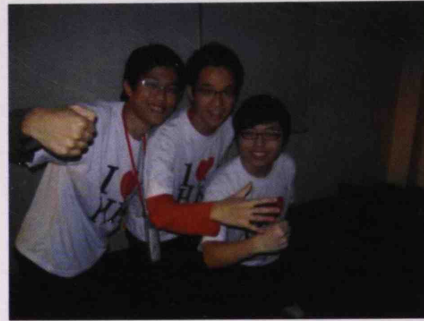
While eagerly answering questions about Hong Kong, we also learnt about our fellow delegates' countries. In particular, we experienced the true impact of HIV/AIDS on Malaysia through site visits to rehabilitation and drop-in centres in Kuala Lumpur.



With inspiring speeches from extraordinary leaders such as Prof. Adeeba Kamarulzaman, President of the Malaysian AIDS Council, practical workshops on condom usage and planning public awareness activities, we gained a lot of knowledge on HIV advocacy.



### Cultural Experience



Besides academic exchange, there was also cultural exchange. After the site visits, we spent the rest of the afternoon paying homage to the famous Twin Towers, trying local delicacies and shopping for souvenirs. What better way to tour the city than with a personal medical-student-guide by your side?

Back on the Monash campus, it was time for the long-awaited Cultural Night. After long nights of frantic rehearsal, we presented the audience with a performance of Tai Chi and Hip-Hop Jazz, illustrating Hong Kong's unique fusion of East and West that was received with thunderous applause.



Back in Hong Kong, we wanted to apply what we had learnt and share our experience.

#### Day 1 – 13<sup>th</sup> February 2009

##### Love Kits and "AIDS. Will you hug me?"

We spent the day before Valentine's Day at the main campus, distributing "Love Kits" – condoms and instructions for proper usage..

To raise awareness about social stigma, we challenged students to hug and accept HIV-positive people.



#### Day 2 – 20<sup>th</sup> February 2009

##### PLHIV (Person Living With HIV) Sharing Session

We were honoured to have two PLHIVs, Marco and Duncan, come to speak to the medical student body. They talked about their experiences with prejudice especially in hospital settings, emphasizing the psychological pain that HIV/AIDS can cause. They encouraged students to understand the disease, because ignorance breeds fear, and fear is the root of discrimination.

Anyone can contract HIV, and HIV is not always someone's "fault". With only 46% of people in 2005 always using a condom with a new sexual partner, the need for people to take responsibility for their own sexual health is more important than ever.



## Coming Soon!

Although the East Asian Medical Students' Conference has officially ended, the 30<sup>th</sup> Asian Medical Students' Conference (AMSC) will soon take place in Taiwan from 25<sup>th</sup> July to 1<sup>st</sup> August, 2009! Bringing together over 300 highly spirited medical students from the Asia Pacific Region, delegates of different regions will discuss and explore issues surrounding the theme, 'Stigmatised Illnesses - To understand, to accept, to change.' With special thanks to the overwhelming responses of fellow students, we are proud to announce that the Hong Kong delegation, which comprises of 45 medical students from both local universities, has been successfully formed!

Do stay tuned for more announcements. We look forward to meeting you in our upcoming activities!

**AMSC** **Taiwan**  
 Think globally  
 Act locally

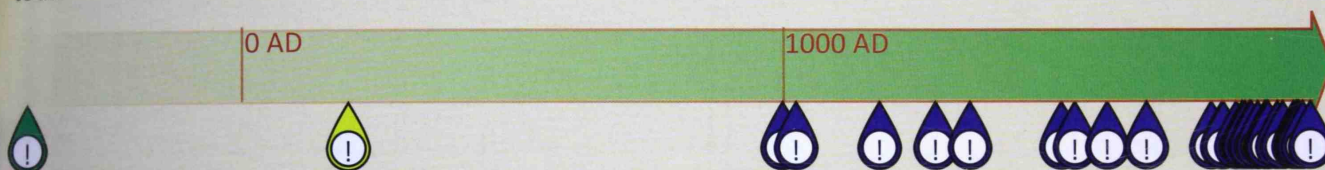
# Milestones And Gravestones – A Timeline Of Western Medicine

Humans are fortunate to have the benefit of hindsight. We appeal to ancestral archives of knowledge, obtain inspirations from past failures, and build on past successes to extend our horizons; it is through this ability that the human race could evolve in an entirely different dimension to the rest of nature.

During all this time, our instinct in the preservation of life has been evolving. As our mind scouted past innumerable milestones laid down by generations of humanitarian scientists, we find ourselves delving into the mechanisms of our mysterious body, probing through the vagaries of our consciousness, and reconciling with our self-preservative nature, under the philosophy of unconditional altruism – and preservation not only of human life, but of human dignity.

Yet the art of medicine and spirit of altruism do not halt time; thousands of gravestones and trillions of lost lives lurk beyond every milestone in medical history. Then one may very well ask: where does progress lead us? What do we gain from understanding our antecedents, and shall we ever succeed in accomplishing what they did not attain?

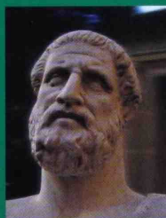
Perhaps history does not invite our interpretations; she merely begs for our appreciation. Let us begin the tour.



420 BC

*"If I keep this oath faithfully, may I enjoy my life and practice my art, respected by all men and in all times; but if I swerve from it or violate it, may the reverse be my lot."*

This powerful line epitomises *Hippocratic Oath* – the professional code for physicians – written by Hippocrates (c.460 BC - 370 BC) both as a philosopher and physician.



The *Oath* eloquently articulated how doctors need to maintain public accountability in their humanitarian missions. The last line in *Hippocratic Oath* translates: *"Men believe only that it is a divine disease because of their ignorance and amazement."* Doctors were encouraged to dispel the myth that diseases have supernatural causes, and distance themselves from superstition. This was a key philosophical transition that enabled western medicine to progress from the "spiritual" to the "rational" realm. The *Oath* was also filled with sage foresight: *"I will not cut for stone, even for patients in whom the disease is manifest; I will leave this operation to be performed by practitioners, specialists in this art."* This requirement for teamwork and professionalism between doctors presaged the development of medical specialties in subsequent ages.

200 AD

This year marked the death of Claudius Galenus (129-200), an influential medical researcher and physician in the Roman Period. He perpetuated Hippocrates' *Humoral Theories*, which explained medical phenomena and pathologies in terms of the balance of four humours the human body, which were associated with four seasons and four natural elements – a concept not dissimilar to Chinese medical philosophy in explaining how human health are related to cirannual changes in the environment. He was also ahead of his time in surgical skills, attempting precarious operations such as brain and eye surgery, procedures that would not be carried out until well over 200 years later. His medical theories dominated Western medicine for over 1000 years.

1000 AD

Kitab Al-Tasrif, a thirty-volume medical encyclopaedia, was completed to serve as the ultimate reference for pan-medieval surgeons and physicians from 12<sup>th</sup> to 16<sup>th</sup> centuries in Europe. Abulcasis (936-1013), an Islamic surgeon and the author of this colossal textbook, was widely hailed as the father of modern surgery. Kitab Al-Tasrif made several leaps in medical research, surgical practice and doctor-patient relationship. The indispensable role of human dissection was recognised in the study of human anatomy, a practice that was to fuel medical research throughout much of western medical history. Abulcasis invented surgical sutures for wound closure, pioneered the use of ligatures for restricting blood flow in surgery, recorded the use of forceps in vaginal delivery, and described many primitive dental surgery procedures.

1025 AD

Avicenna (980-1037), a Persian physician, completed The Canon of Medicine. This is a fourteen-volume Arabic medical encyclopaedia that remained one of the major standard medical textbooks up till the 18th century, and even to early 19th century. The Canon formed the basis of traditional medicine practiced in India. The philosophy on human pathology is largely based on the humoral theory of Hippocrates, who postulated that a balance of "four humours" in the human body - blood, phlegm, yellow bile and black bile, is essential for maintaining health. Despite the ancient origin of its theories of disease, many modern medical practices can trace their roots back to The Canon, including such valuable concepts as randomised controlled trials in evidence-based medicine, control of hypertension by lowering blood cholesterol, and the contagiousness of infectious diseases including tuberculosis and sexually-transmitted diseases. Avicenna also developed the earliest thermometer for recording the temperature of a patient.



0 AD

1000 AD



1180 AD

The title "doctor" was first used legally for physicians in Schola Medica Salernitana, the earliest medical school in Europe situated in the Italian town of Salerno. The Archbishop of Salerno was a Greek Christian doctor who had emigrated from Tunisia, bringing with him a treasury of advanced Islamic medical texts that included the insightful work of Avicenna and Abulcasis. He translated these works into Latin, allowing the School of Salerno to serve as a cultural melting pot in medicine, allowing Greek, Latin, Arab and Jewish medical practices to complement and inspire one another, setting a good example for how different streams of medical thoughts can converge on the grounds on education. After all, the for-gone tale of the Salerno medical school could turn out as an ancient equivalent for the ongoing trend of synthesis between Western Medicine and Traditional Chinese Medicine.

1284 AD

The first spectacles appeared as early as 13th century, when Salvino D'Armato (1258-1312) and Roger Bacon (1214-1294) simultaneously invented convex lens spectacles to correct hypermetropia (far-sightedness). Concave lens spectacles for myopia (short-sightedness) did not appear until almost two centuries later, in 1403.

1348 AD

In 1348, the Black Death advanced from central Asia into the rest of Asia and Europe, devastating societies and economies. The plague struck central Asia around 1320, originating from a species of rodent called Bobac Marmot (*Marmota bobak*), which acted as the disease reservoir. A large population of Marmots lived near Lake Issyk-Kul, which was unfortunately a prominent stop-over along Silk Road. As a result, traders

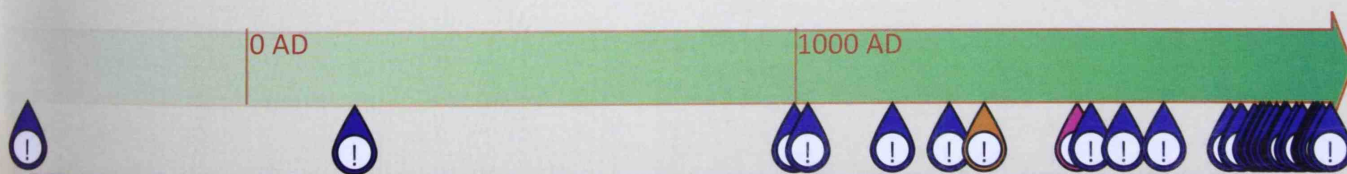
quickly spread the plague to South Asia, Europe and Africa. It was estimated that this pandemic episode, lasting for almost three decades, reduced the world population of 450 million to 370 million: as much as a third of the population in Europe and beyond half of that in China were wiped out.

Medieval physicians definitely had a hard time understanding the aetiology of the plague: with microbiology still in gestation, there was general ignorance towards communicable diseases among physicians, who were not able to do anything to save the victims of the plague. The culprit was ultimately identified in 1894, when a local plague epidemic with an astounding death rate of 90% broke out in Hong Kong, following a pandemic that had not only claimed the lives of over 12 million people in China and India, but had spread beyond Asia with the advent of sea trade.

*Yersinia pestis*, a gram-negative bacillus, was identified as the causative pathogen from the late 19th century Hong Kong outbreak. In the 1894 outbreak, rats were identified to be the reservoirs for the bacteria, and fleas as the vectors for the plague; flea bites can inoculate the victim with regurgitated blood containing the bacteria and lead to their lymphatic spread, causing clinical symptoms consistent with those in medieval accounts. Victims had large black patches appearing on the skin, showing infected, haemorrhagic, necrotic, and eventually bursting lymph nodes with infective blood and pus oozing from the wounds. These swollen lymph nodes were called buboes, which gave bubonic plague its name; extensive sub-epidermal haemorrhage and gangrene in the extremities accompanied these buboes.

Notably, *Yersinia pestis* can also cause different sets of symptoms depending on the route of infection: septicaemic plague occurs when the bacteria enters the bloodstream, where the bacterial endotoxins cause disseminated intravascular coagulation, depleting clotting factors in the blood and causing widespread internal bleeding and death within a day if patients remained untreated. Pneumonic plague spreads through respiratory droplets, and carries a high fatality rate and relatively long incubation period of 2-4 days.

The contemporary plague was, however, noticeably different from the Black Death: it did not cause mortality in such a drastic manner as the medieval plague, spread much more slowly, and had a low mortality rate as opposed to 50-90% of the afflicted perishing within a week of symptom emergence in the case of Black Death. In view of the variable manifestations of the plague and positive forensic evidence for *Yersinia* genetic material in the burial sites of Black Death victims, it is nonetheless interesting to note how the pathogens may have co-evolved with humans through the centuries. Another key lesson from the Great Plague is that successful quarantine measures can curtail the spread of infections. In Milan only 15% of population succumbed, probably the lowest mortality rate amongst all the major European cities affected by the plague: it was no coincidence that quarantine was ordered for the first few affected households and the plague was prevented from raging through the city at an early stage.



1518 AD

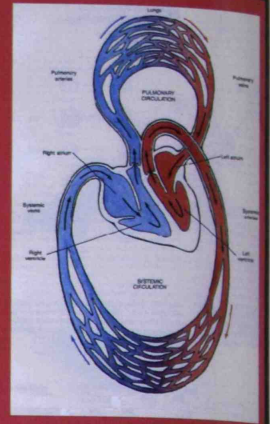
Thomas Linacre (1460-1524) and five other physicians co-founded the Royal College of Physicians with a royal charter granted by King Henry VIII. The College is responsible for the regulation and licensing of doctors, imposing fine and imprisonment of unlicensed doctors. This organisation created the precedent for a professional regulatory body to which physicians are held accountable, establishing and regularly updating professional standards according to social changes and latest advances in medical research. This regulatory function is crucial for establishing rapport and trust between the medical profession and the general public.

1543 AD

Andreas Vesalius (1514-1564) published one of the most influential anatomy textbooks in the history of medicine. *De Humani Corporis Fabrica* (On the Fabric of the Human Body) was based on meticulous human dissection studies conducted by Vesalius, initially seeking to verify Galen's deductions on human anatomy. He ended up correcting many of the erroneous anatomical details suggested by Galen's work, which were based mostly on dissection of Barbary Macaque – a monkey assumed erroneously to share most anatomical details with humans. Vesalius' work emphasised the importance of relating the function of internal organs to their three-dimensional distribution in the human body, and played a large role in promoting the use of anatomy to interpret physiological and pathophysiological mechanisms.

1603 AD

William Harvey (1578-1657), a British physician, postulated and later proved successfully that blood flows in a systemic circulation in humans. Due to the prevalence of Galenus' theory (refer to entry for 200 AD) that blood is constantly produced by the heart and liver and consumed in the rest of the body, earlier observations by Islamic physicians about a dynamic circulation of blood in the human body were disregarded. Harvey was the first person to record quantitative studies in biology – he measured cardiac output and concluded that the amount of blood the body needed to produce would have been impossibly great unless blood is recycled. He also deduced the presence of double circulation with observations on the directions of venous blood flow in the limbs and the neck and concluded that veins carried blood towards the heart.



0 AD

1000 AD



1676 AD

Antonie van Leeuwenhoek (1632-1723), regarded as the father of microbiology, discovered bacteria using an improved version of Robert Hooke's prototype microscope invented earlier in the century. Apart from his microbiological discoveries, the microscope he made allowed him to observe muscle fibres, capillary blood flow and spermatozoa directly for the first time. This provided the visual basis for many biological discoveries in future years.



1816 AD

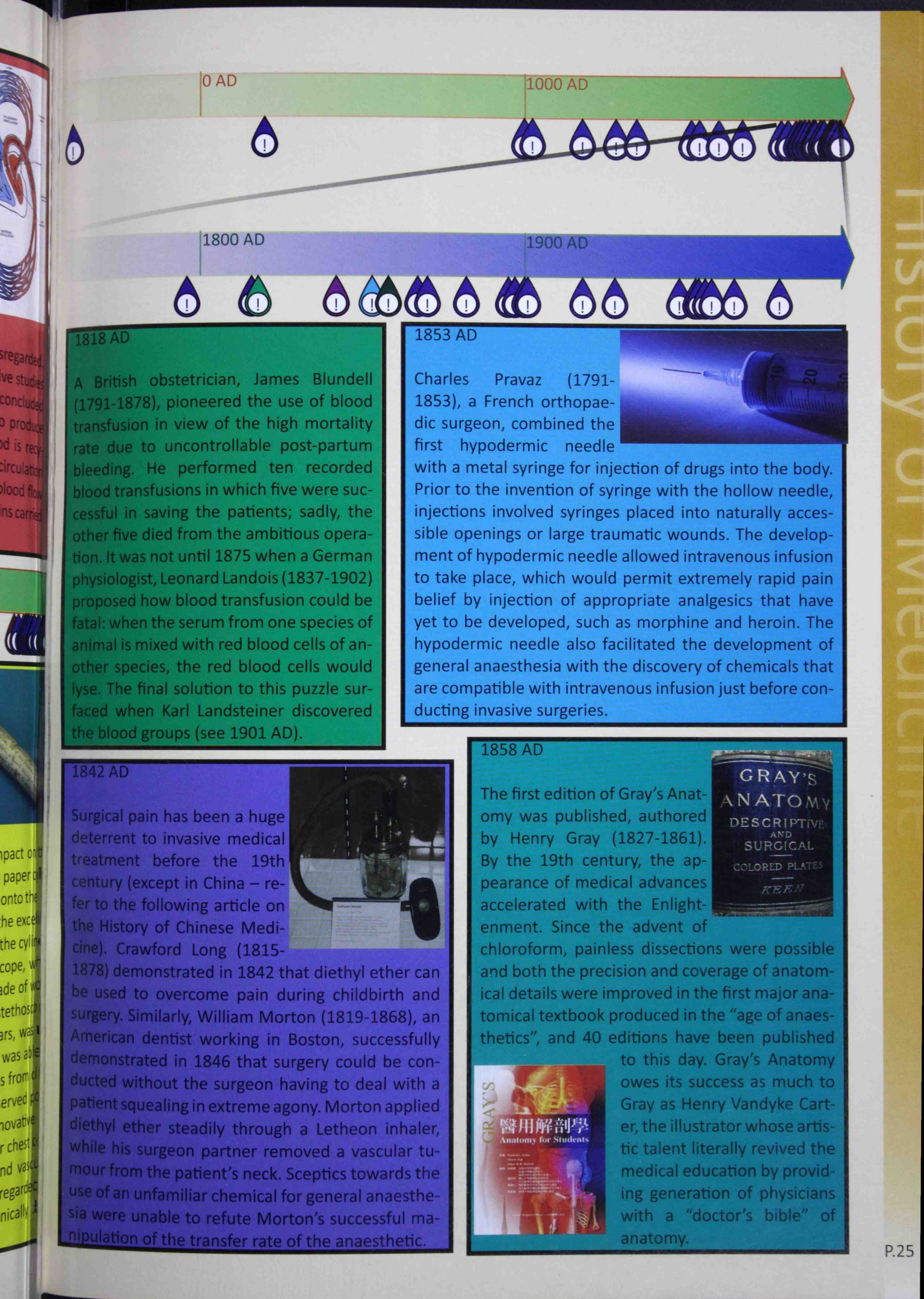
Rene Laennec (1781-1826), a French physician, was too shy to listen to an ample female patient's heart sounds. The solution he devised carried a long-lasting impact on the course of medicine: he improvised a paper cylinder to avoid directly pressing his ear onto the patient's breast, but was surprised at the excellent amplification of heart sounds using the cylinder. This became the prototype stethoscope, which consisted of a single hollow tube made of wood and brass. The familiar binaural stethoscope, with rubber tubing going to both ears, was not developed until the 1850s. Laennec was able to systematically correlate chest sounds from clinical observations to pathologies observed post-mortem, hence giving birth to an innovative set of non-invasive diagnostic criteria for chest conditions involving the lungs, heart and vascular diseases. Although he is still widely regarded as the father of chest medicine, he ironically died of tuberculosis in 1826.



1796 AD

Edward Jenner (1749-1823) observed that milkmaids never contracted smallpox and successfully devised the smallpox vaccine using pus from milkmaid that have contracted cowpox, a much milder disease that is similar to smallpox. Jenner's credit stems from his effort in widely publicising the use of smallpox vaccine to induce immunity in healthy individuals, and turned a monumental page in the book of medical history: humans can now acquire immunity from a disease with direct prophylaxis.





1818 AD

A British obstetrician, James Blundell (1791-1878), pioneered the use of blood transfusion in view of the high mortality rate due to uncontrollable post-partum bleeding. He performed ten recorded blood transfusions in which five were successful in saving the patients; sadly, the other five died from the ambitious operation. It was not until 1875 when a German physiologist, Leonard Landois (1837-1902) proposed how blood transfusion could be fatal: when the serum from one species of animal is mixed with red blood cells of another species, the red blood cells would lyse. The final solution to this puzzle surfaced when Karl Landsteiner discovered the blood groups (see 1901 AD).

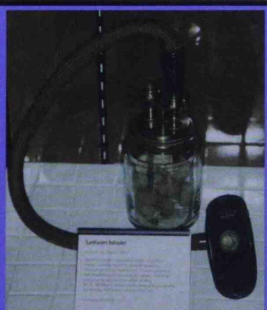
1853 AD

Charles Pravaz (1791-1853), a French orthopaedic surgeon, combined the first hypodermic needle with a metal syringe for injection of drugs into the body. Prior to the invention of syringe with the hollow needle, injections involved syringes placed into naturally accessible openings or large traumatic wounds. The development of hypodermic needle allowed intravenous infusion to take place, which would permit extremely rapid pain relief by injection of appropriate analgesics that have yet to be developed, such as morphine and heroin. The hypodermic needle also facilitated the development of general anaesthesia with the discovery of chemicals that are compatible with intravenous infusion just before conducting invasive surgeries.



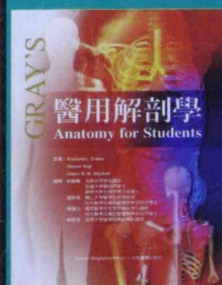
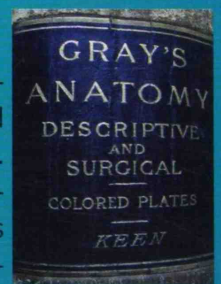
1842 AD

Surgical pain has been a huge deterrent to invasive medical treatment before the 19th century (except in China – refer to the following article on the History of Chinese Medicine). Crawford Long (1815-1878) demonstrated in 1842 that diethyl ether can be used to overcome pain during childbirth and surgery. Similarly, William Morton (1819-1868), an American dentist working in Boston, successfully demonstrated in 1846 that surgery could be conducted without the surgeon having to deal with a patient squealing in extreme agony. Morton applied diethyl ether steadily through a Letheon inhaler, while his surgeon partner removed a vascular tumour from the patient's neck. Sceptics towards the use of an unfamiliar chemical for general anaesthesia were unable to refute Morton's successful manipulation of the transfer rate of the anaesthetic.



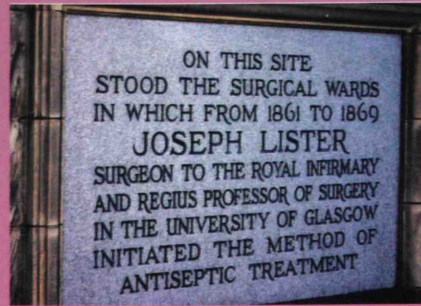
1858 AD

The first edition of Gray's Anatomy was published, authored by Henry Gray (1827-1861). By the 19th century, the appearance of medical advances accelerated with the Enlightenment. Since the advent of chloroform, painless dissections were possible and both the precision and coverage of anatomical details were improved in the first major anatomical textbook produced in the "age of anaesthetics", and 40 editions have been published to this day. Gray's Anatomy owes its success as much to Gray as Henry Vandyke Carter, the illustrator whose artistic talent literally revived the medical education by providing generation of physicians with a "doctor's bible" of anatomy.



1867 AD

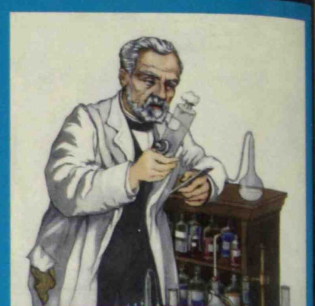
Before 1867, mortality rates of invasive surgery frequently reached 80% due to wound infections and other complications.



Inspired by the early research of Louis Pasteur into microbes (See 1870 AD), Joseph Lister (1827-1912) revolutionised published the Antiseptic Principle of the Practice of Surgery, one of the most important developments in surgery. Lister was convinced of the need for cleanliness in the operating room, a revolutionary idea at the time. He developed antiseptic surgical methods using phenol (a.k.a. carbolic acid) to clean wounds and surgical instruments. The immediate success of his methods led to general adoption: in one hospital that switched to practice antiseptic surgery, death rates from post-operative infections decreased from nearly 60% to just 4%. Lister's antiseptic surgery may be considered as one of the watersheds in medical history, shaping not only the methodology of healthcare but the attitude of medical service providers about disease treatment and prevention.

1870 AD

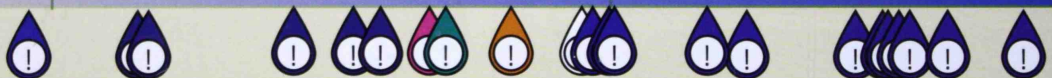
Louis Pasteur (1822-1895) and Robert Koch (1843-1910) established the evidence for the germ theory of disease, and succeeded in convincing the world



of this important concept. Germ theory states that a specific disease is caused by a specific organism. Before this discovery, most doctors believed that diseases were caused by spontaneous generation or miasma, a form of imagined air pollution due to decomposed organic matter. Therefore contact precautions were non-existent, and it was common practice for doctors to perform autopsies on people who died of infectious diseases and then care for their patients without washing their hands, not realizing that they were transmitting pathogens from the corpses to the patients. Pasteur showed that microbes are responsible for spoiling nutrient-rich liquids and invented pasteurisation, a process by which milk and juices are heated to kill off most bacteria and fungi for safe storage and consumption.

1800 AD

1900 AD



1882 AD

Robert Koch isolated and identified Mycobacterium tuberculosis, the tubercle bacillus responsible for causing tuberculosis. Tuberculosis has always been with humanity, but it was not until the industrial revolution that cities began to grow, and the poor were exposed to high population densities and poor hygiene, two factors conducive to the tuberculosis epidemic in the late 19th century. Koch contributed to both the recognition of contagiousness of tuberculosis and development of the tuberculin skin test, facilitating early detection of the disease and effective quarantine of patients. This combined with improvement in standard of living amongst the poor as sanitation helped to contain what was known as the "Great White Plague".

1895 AD

Wilhelm Roentgen (1845-1923) discovered X-ray pioneered medical radiological imaging, allowing doctors to examine the internal structures of patients to make more precise diagnoses. Roentgen became the first person to take an X-ray as he used his hand to project a shadow of an electron beam on a fluorescent screen in his laboratory. He concluded that electron-dense structures, including the skeleton and solid organs, would cast a white shadow upon the film, while electrons passing through electron-permissive structures, such as air in the lungs, would turn the film black. Hence, X-ray became the routine check for skeletal injuries, defects and chest pathologies. This monumental discovery led Roentgen to receive the first Nobel Prize in Physics in 1901.

1895 AD

Daniel Palmer (1845-1913) established chiropractic care under the hypothesis that nervous injury can directly impact on general health. Therefore the main therapeutic method in chiropractic care focuses on reducing irritation to the spinal nerves by applying specific movements to the spinal cord. Qualified chiropractors use adjustments in dealing with sports and occupational injuries, rectifying local pain in joints and muscles, even relieving sciatica. Chiropractic care has been battling with mainstream medical science for acceptance since its establishment, due to the lack of mechanistic evidence in support of chiropractic.

1897 AD

Sir Ronald Ross (1857-1932) identified Anopheles mosquitoes as the vector for Plasmodium, the malarial parasite. The Anglo-Indian showed how mosquito bites could transmit the parasite into the human body, and promoted the importance of malarial control by breaking the life cycle of vectors. The elucidation of the etiology of malaria was especially important as malaria is likely to be the infectious disease that has affected most people in the world. Ross received the 1902 Nobel Prize in Medicine in recognition of his devotion to studying malaria.

1897 AD

Acetylsalicylate was synthesised in its pure form by a Felix Hoffman (1868-1946) in the pharmaceutical laboratory of Bayer AG, and this was sold under the brand name Aspirin. By mid 19th century, the development of anaesthetics was under way and acute pain from surgery or trauma could be alleviated; however, morbidity associated with chronic pain remained a clinical pharmacological challenge.

The magic drug has always been there: even by 4th century BC, Hippocrates had already noted in his works that a bitter powder extracted from the bark of trees such as Willow (*Salix sp.*) carried potent analgesic and anti-inflammatory properties. Hoffman successfully extracted acetylsalicylate from another medicinal shrub, Spiraea – from which aspirin was named; he also devised a way of mass-producing aspirin, making it available to the public.

Later research showed that acetylsalicylate acts as an irreversible inhibitor of cyclooxygenase (COX), a key enzyme involved in the production of pro-inflammatory prostaglandins. Recently research postulates evidence that long term exposure to low doses of aspirin can exert a protective effect from stroke and heart attack. There seems to be more to aspirin than meets the eye; however aspirin should still be remembered as a historical landmark, after which the pharmaceutical industry began to prosper.

1800 AD

1900 AD



1900 AD

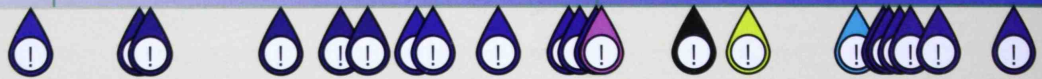
Sigmund Freud (1856-1939) published Interpretation of Dreams. Freud set out with using hypnosis to treat patients with mental disorders, and was soon able to link suppressed traumatic experiences with psychological symptoms. When he noticed that hypnosis did not work in every case, he developed a technique named "free association" whereby the patient is asked to lie on the couch and talk about personal experiences freely and in a relaxed manner. He recognised how past experiences would exert subconscious control on his patients, and proceeded to psychoanalyse himself, culminating in a report of the psychosexual development of humans in Interpretation of Dreams. Freud's works were very important as they eventually formed the first comprehensive theory of personality, which has proved to be effective in treating mental disorders and instructive for future psychologists to develop such treatments.

1901 AD

Karl Landsteiner (1868-1943), an Austrian physician, solved the mystery of why over half of blood transfusions had to fail: there are agglutinins in blood against red blood cell antigens, and widespread blood clot forms when donor agglutinin is of the type that would bind to recipient blood antigen. Landsteiner received little initial recognition, but eventually received the Nobel Prize in Physiology or Medicine in 1930 for his influential work on ABO blood groups. Blood transfusion was still not always safe: blood from two persons of blood group O still clumped together 60% of the time. Alerted by this finding he discovered the Rhesus Factor (RhD): another type of antigen on red blood cells to which antibodies can be developed through placental sensitization or blood transfusion. This discovery was important in ensuring that blood transfusion is safe so that people still have a chance to live after massive bleeding; it also reduced infant mortality by tackling haemolytic disease of the newborn with pre-partum injection of anti-RhD IgG antibodies to mothers.

1800 AD

1900 AD



1918 AD

The "Spanish flu", a pandemic of influenza A virus of the H1N1 subtype, killed over 30 million people within 2 years at the end of WWI.



This outbreak differed from traditional influenza in several ways. Normal flu attacked infants and the elderly with their weakened immune systems, but the Spanish flu mainly victimised young healthy adults with a strong immune system; respiratory symptoms, malaise and fever would dominate in normal flu, but symptoms of the Spanish flu involved severe haemorrhage of the mucosal linings in the nose and gut, pulmonary oedema and haemoptysis.

The mortality was staggering for the 1918 pandemic, hovering around 20%, and above half of those who came into contact with the virus got infected; for normal flu the mortality rate is below 0.5%. Victims could die on the same day of infection from respiratory failure as the lungs became filled with body fluid. In view of the severity of symptoms in this "forgotten epidemic" and recent deaths due to avian flu, interest in the 1918 epidemic has been revived. The H1N1 influenza viruses, still persisting in avian reservoirs just like the subtypes known in modern episodes, serve as a silent reminder to humanity that a pandemic may break out afresh as the viruses re-evolve the ability for human-human transmission.

1928 AD

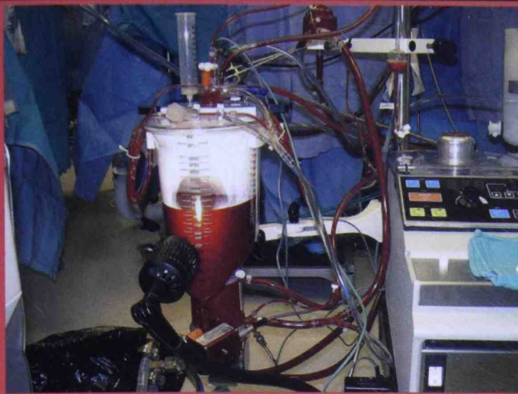
Alexander Fleming (1881-1955) discovered penicillin from the mould *Penicillium notatum* and Howard Florey (1898-1968) later launched this antibiotic into mass production. Florey recognised the potential of penicillin in treating traumatic wound infections, but purifying it was a challenging task, as only one part per two million of the liquid extract from the mould was pure penicillin. Florey's team was however successful in purifying the antibiotic, and divulged the information to the US government and pharmaceuticals, massively amplifying the yield of the magic antibiotic. Penicillin has changed the course of history – at least it played a well-timed part in reviving wounded Allied soldiers while their Axis counterparts suffered limb amputations if not death.

1948 AD

World Health Organization (WHO) was established on 7th April 1948, working towards "attainment by all peoples of the highest possible level of health", as stated in her official vow. At the end of WWII, the newly established United Nations recognised the need for international cooperation in tackling global-scale public health issues: epidemics by both known and novel pathogens, deficiency in primary health care, and lack of health education still afflicted most of the world population, especially for developing countries. WHO brought the political and scientific forces together and made it possible to instigate progress in each of these three arenas.

1953 AD

John Gibbon (1903-1973) invented the heart-lung machine, which allows the heart to be stopped more than a few minutes at a time. Dr. Gibbon had been part of a



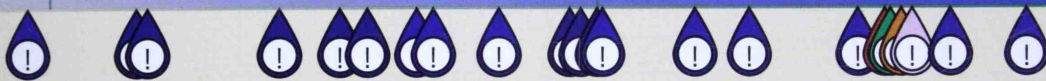
surgical team in Boston that failed to save a patient suffering from pulmonary embolism, and the failure stimulated his resolution to devise a machine that would take over the patient's lungs and heart during surgery, serving as an "extracorporeal circulation". The heart-lung machine is actually a hollow metal cylinder with an interior network of wire screens to create turbulent blood flow and large surface area for blood oxygenation. With the heart-lung machine available, cardiac surgeries involving cardiopulmonary bypass (CPB) has become the routine for cardiac surgeons, giving hope to the increasing number of patients with heart diseases.

1954 AD

Joseph Murray (1919- ) performed the first kidney transplant from an adult to his identical twin, winning the Nobel Prize in Physiology or Medicine in 1990 for his work on organ transplantation. Later on in 1959 he also successfully transplanted an allograft, and devoted much of his life to look for effective anti-rejection drugs. Organ transplantation offers immense hope to patients with irreversible organ failure. However the post-operation mortality rate due to organ rejection remains high, with 5-year mortality up to 33%. The immense cost of transplantation has also raised financial concerns that resources could be funnelled into measures that may benefit more people in the long run.

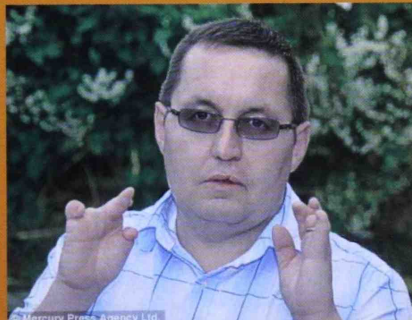
1800 AD

1900 AD



1956 AD

Thalidomide was discovered accidentally by Wilhelm Kunz, a German chemist, in search of antibiotics. Instead he rightly deduced from the molecular structure of thalidomide that it has anti-emetic, anti-nausea and sedative effects. Avidly promoted by pharmaceutical companies that sold



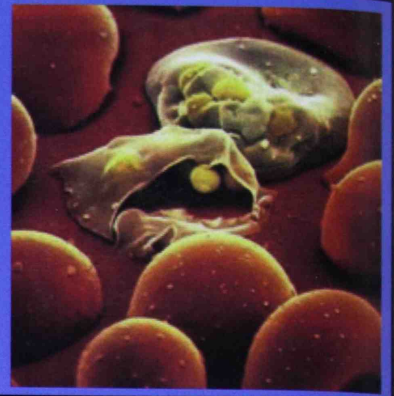
the drug under 51 trade names in 46 countries, thalidomide was hailed to be particularly useful for combating morning sickness in pregnant ladies. That was until 1961, when Dr. William McBride, an Australian obstetrician, noticed that many pregnant women that had used thalidomide gave birth to severely deformed babies with birth defects such as limb malformations (phocomelia). Thalidomide was banned from the market and this was a painful lesson – as many as 7500 "thalidomide babies" had already been born at that time. Drugs are often double-edged swords, and recent interest into thalidomide analogues has been revived due to indications that these drugs are effective against a range of cancers including multiple myeloma, due to their immunomodulatory and anti-angiogenic effects, and leprosy. The thalidomide story, in any case, would continue to serve as a perpetual reminder of human ignorance.

1958 AD

Rune Elmqvist (1906-1996) developed the first internal artificial pacemaker for the treatment of heart block and arrhythmia. The early models worked on mercury-zinc batteries and had a life of only two to three years. In the 1980s, pacemakers with tiny micro-processors in them came to light – these pacemakers can be automatically reset by detecting erratic heart rhythms. Nowadays, pacemakers are fuelled by a chip of plutonium and have a projected lifespan of around 20 years.

1965 AD

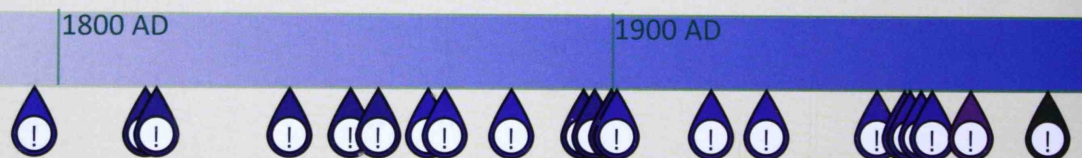
The World Health Organisation launched a worldwide campaign to eradicate malaria with DDT, culminating in failure as the mosquitoes responded by developing resistance to the chemical. DDT is an insecticide with potent carcinogenic and toxic effects on wildlife. Malaria causes more than one million deaths annually and bringing it under control still remains a major current objective of healthcare professionals in endemic areas. However the failure of this campaign showed that public health measures need to be carefully tested and planned before execution, due to their wide-ranging effects.



1979 AD

The World Health Organisation declared that smallpox has been eradicated successfully. Smallpox was estimated to have been responsible for 40 million deaths in the 19<sup>th</sup> century and up to 500 million deaths in the 20<sup>th</sup> century; those who were born around 1966 would bear the vaccination scar that reminds us of how the pandemic has swerved the course of human history. Even though Jenner's smallpox vaccine emerged almost 200 years before, smallpox persisted well into the 20<sup>th</sup> century to take its toll on, as remote areas in developing countries never gained access to the vaccination.

The ten-year vaccination campaign coordinated by WHO was therefore a crucial move: by 1971 range of smallpox had shrunk to what is now Bangladesh, but the civil war in Pakistan forced refugees to camp at high densities in India where smallpox again broke out, spreading throughout Bangladesh. WHO responded quickly and set up surveillance teams, visiting 89% of households in the country in nine days and exhaustively vaccinated everyone in the vicinity of outbreaks. This forgotten tale of success by active intervention should shed some light on our control of AIDS, the disease which overshadows recent medical advances as it insidiously takes its toll.



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# 中醫簡史

## 第一章:遠古時代



人類在本能的救護活動基礎上創造醫學,將行為中觀察到的本能救護反應積累起來,有意識地進行醫療活動,並在勞動生活中不斷充實和總結,例如有時皮膚上生了膿瘡,當被樹枝石塊劃破以後,膿血排出來,瘡傷很快就好了;原始人類又發現用尖石或火刺激某一些部位時能達到治癒疾病的效果,這就是針灸的起源。在經驗的不斷積累下,慢慢形成了有指導作用的醫學理論。

原始人類對於生活環境和世界都心存數之不盡的疑問,對於不能解釋的自然現象,必然會由畏懼大自然,轉向崇拜大自然,再轉向對某些自然物或想像物的依賴和崇拜,於是產生了「圖騰崇拜」和「鬼神」觀念,就這樣導致巫術的興起。當中就會有人攙和醫術跟巫術去治療他人。在神權無上的古代,加上這種醫術跟巫術結合的治療方法有時也會得到想要的效果,引致巫醫成為古代醫藥治療的主流。

## 第二章:夏商朝

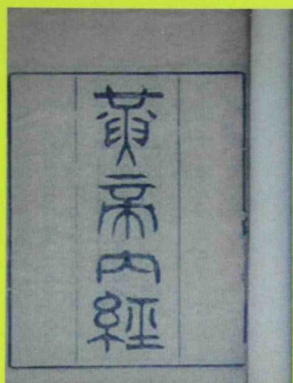
夏商兩朝的醫家對於疾病已有明確的分類。大多是按人體部位而命名,如疾首(頭痛)、疾目、疾齒,也有跟據功能障礙定名的,如疾言(說話困難)、疾育(婦科病)等。可見當時病名已包括內、外、婦等專科。

除了在識病方面已經積累了豐富的經驗,藥酒和湯液的面世也是夏商兩朝的重要醫學貢獻。人工釀酒技術和湯液的發明,為中藥的劑型開闢了一條新的途徑。最早治病用藥,僅用單味藥,咀嚼吞服或者塗於皮膚上。至夏商,醫家已會利用釀酒技術,將多種草藥製成藥酒,用於防病或治療外創。此外,還會將草藥以水煮後,服下湯液。這兩種新的技術不但使用藥和服藥比以前方便了許多,而且因為便於多種藥物應用,為提高療效,減低毒性的深化研究創造了條件,促進了方劑學的形成與發展。

但醫學技術始終由巫醫主導,還沒做到巫、醫分家。



### 第三章:周、春秋戰國、秦



這段時期可謂中國醫學史上的一個重要的里程碑。首先,當時的人民開始對天產生諸多的疑惑和不滿,以致神權至上這個觀念開始受到挑戰。醫學方面,不少人提出「信巫不信醫」乃是很多病治不好的主因,於是我國的醫學就從此步入純經驗積累和學術研究的階段,真正做到「巫、醫分家」。

其次,就是哲學思想對醫學的滲透。我國的重要哲學著作《周易》中的陰陽學說,用來闡釋萬物變化的五行學說,還有古代研究物質、生命起源和變化所用的「精」、「氣」論,全都被應用於中醫學中,來解釋人體生理、病理現象。

此外,《黃帝內經》的成書促進了中醫的系統化和理論化。《黃帝內經》集合了這個時代醫學理論的光輝成就,當中包括了藏象學說、經絡學說、病因和病機理論、診法、治則,還有來自諸子百家的養生學。《黃帝內經》為我國史上最重醫學著作,後世許多其他醫學經典都是在《黃帝內經》理論基礎上發展出來的。

### 第四章:兩漢、三國

東漢末年,戰禍連年,瘟疫流行,民不聊生,社會對醫學的要求十分迫切。很多有識之士紛紛轉而研究醫學,在草藥學上的突破尤其顯著。《神農本草經》的成書標誌着中醫的治法變得更加多樣性。西漢前,中醫的治法大多圍繞著針灸,雖然也有外敷和內服的中藥,但是始終為少數。

自兩漢開始,藥物性質、功用得到全面的研究,而《神農本草經》就收錄了當時以及前人研究中藥所得到的成果。當中有系統的將中藥分為玉石、草、木、人、獸、禽、蟲魚、果、米穀、菜十類,也詳細的陳述了每種藥的性、味、功用、有毒無毒、主治、異名和出產環境。

除了本草學的成就外,醫學基本理論也在《黃帝內經》的基礎上得到進一步的發展,成果被收入《難經》。往後,醫家張仲景刻苦鑽研《黃帝內經》、《難經》等醫書,再結合當時醫家和個人長期積累的醫療經驗,寫出了垂世之作《傷寒雜病論》。這部醫著是古代醫學理論與臨床實踐的成功結合,並突出了辨證論治的診療原則。

談到三國時期的醫學突破,絕不能忽略華佗發明的外科手術療法。公元前二百多年,當西方外科醫生仍然用木棍將病人擊昏的時候,華佗已經開始用麻沸散來進行全身麻醉,來施行陰道閉鎖、切除乳癌等手術。可惜這種技術沒被後世作進一步的發展。

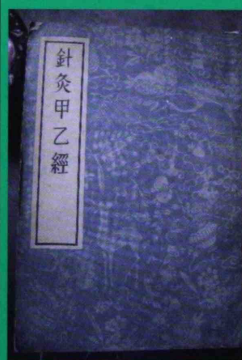


### 第五章:兩晉、南北朝

三國以後,中醫學的雛形基本上已經成形。往後的中醫研究很大部分就是基於前人所創的理論體制。

在這段時期,發展比較突出的分別是為脈學、針灸學。切脈自古以來是中醫獨特的診病方法,倍受醫家的重視。《黃帝內經》中有關脈學的內容已經十分豐富。古代著名醫家無一不精通脈診,但脈診在古代一向被視為不傳之祕,導致脈診之法極易失傳。有見及此,晉初著名醫家王叔和總結了魏晉以前的各派脈法,並將之收入其著作《脈經》中。正式標誌著脈診理論的系統化。

在古代,針灸一向是最常用的治法,但是有關針灸的古籍內容卻十分混亂,而且理論多而切合實用少。因此皇甫謐對古代針灸著作進行了整理和理論的具體化,成為我國第一部針灸學專著《甲乙經》。





## 第六章:隋、唐、五代

隋唐時,我國國力強盛,朝廷於是投放很多資源於醫學典籍的整理和研究,病因、病機學和方劑學方面得到了卓越的成就。



當時中醫已經將疾病細分為內科、傷科、外科等幾十門專科,而對每科疾病的病因病機都有了非常深入的了解和認識。

此外,方劑學的繁榮更是前所未有的。期間有大量的方劑學著作面世,而當中的佼佼者就是醫家孫思邈所著的《千金方》。《千金方》全面地繼承了唐以前的臨床醫藥學成就,使學科全備而系統化,促進了後來的臨床醫學向專科發展。



## 第七章:宋、元

宋朝自太祖趙匡胤起就很重視醫學,不斷投入大量的資源去發展醫學和培訓醫學人才。宋廷成立了正醫書局,集中了大批的醫官,對醫學經典著作進行了系統的整理。使某些瀕於失傳的醫書,不但質量提高,版本統一,也保證了基於這些經典的發揮。另一方面,宋的官方醫學教育更是史無前例的鼎盛,由太醫局主持選拔學生,在春季招收考試及格的三百人教授醫學。

當時民間的醫家亦勇於創新,形成了不同的醫學學術流派。各個不同的流派都有自己獨特的辨病和治病的方法,好像「寒涼派」認為火熱是多種病證的主要機理,用藥就以寒涼藥劑為主;「攻邪派」就認為大多數病都是因為體內有邪氣,治療時應注重攻邪,少用補藥。各派醫家各有特色,流派的出現,促進了臨床醫學發展,使中醫進入一個百家爭鳴的時代。

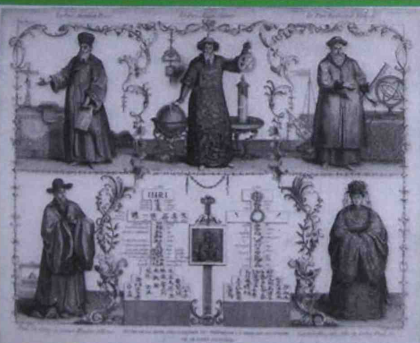
## 第八章:明

明朝醫學發展史當中最為人津津樂道的離不開本草學和臨床醫學的成就。明代民間醫生李時珍經過二十年潛心研究本草著作及藥材實物,並親赴湖北、安徽、江蘇等地,虛心向農、獵、漁、藥農等各種人討教,吸收他們在本草上的經驗。更難能可貴的是,他時常親口嚐驗各種本草去了解他們的藥性。於公元一五七八年,完成了我國史上最重要的本草巨著《本草綱目》。其載藥一千八百九十二種,附方一萬一千零九十六首,附圖一千一百六十幅,被譽為本草的百科全書。



明代大量方書、醫論的湧現,反映出中醫臨床治療空前的盛況。在各個專科上,對病因、病機、治法、用藥已有十分透徹的理解。

## 第九章:清



清朝的醫學發展基本上是承繼了明代醫藥盛況。如對經典著作的研究,本草學、方劑學、醫案(病歷)的整理等,都比明代更成熟。各個流派的醫家的紛爭也漸趨緩和,大多醫家都能採各家之長而折衷於臨床。此外對急性傳染病的研究也取得了突破,形成了一個新的系統,就是溫病學說。

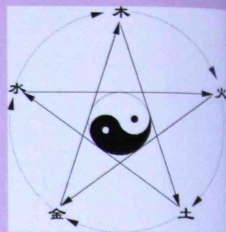
至清末國門被列強敲開以後,西醫學的影響已不像以前那樣僅來源於個別傳教士。西方科技的刺激變得舉足輕重。尤其是西方國家有意識地把醫學作為實現他們宗教目的的先行,所以西方醫學對中國醫學的滲透更為明顯。國人也對外來醫學十分感興趣,於是中西醫匯通的主張應運而生。

## 最終章:近代史及現代

這段時期是中國醫學發生重大變革的時期,一方面由於國家的弱勢,使很多國人紛紛學習西方文化,不論在科學、醫學上,還是其他方面都漸趨西化,並同時否定了自己國家的文化,加上帝國主義的文化侵略迫害,使中醫遭到了重大的挫折;同時西洋醫學又在我國迅速發展,終於形成了中西兩種醫學並存的格局,一直影響至今。

1911年,辛亥革命推翻了清皇朝,建立了中華民國;其後,袁世凱在北京成立北洋政府。

1912年7月10日至8月10日,教育部召開第一屆臨時教育會議。同年9月3日,教育部頒布各科學校令,即《中華民國教育新法令》。該法令中有關醫藥教育的規程令曾頒布過兩次,第一次為1912年11月間,第二次為1913年1月間,但兩次都沒有把中醫藥學科列入其中。



儘管當時的教育部一再否認有輕視中醫的思想,但事實上,當時有不少人盲目追隨日本的革新經驗,照搬日本廢止漢醫的做法。

這一漏列中醫藥的法令一經頒布後,立即引起了中醫藥界的極大反應。其後,上海神州醫藥總會余伯陶等人立即和各地醫學團體進行聯繫,於1913年10月19個省市醫學團體組成了「醫藥救亡請願團」,並擬定了《神州醫藥總會請願書》。這就是北洋時期著名的漏列中醫藥案,也就是近代中醫藥史上首次抗爭救亡運動的直接導火線。

之後在中西醫學不斷的碰撞之下,中醫學與世界科學在形式、內容上的差異,加上在很多當時學習西醫的人的眼中,中醫學充滿了「腐敗」氣息,好像是中醫學理上的謬誤玄虛、中醫品流低劣以及醫風敗壞等,導致引進西醫革新中醫思想的萌生。但實際上以西醫革新中醫根本與消滅中醫無異。所以這個情況持續了不久後,就很快演化為中醫廢存的問題。

終於在1929年2月23日,南京政府衛生部召開第一屆中央衛生委員會議,余雲岫以中華民國醫藥學會上海分會會長的名義參加,並拋出《廢止中醫案》。余雲岫稱已經不願意再花任何精力在探討中醫上面了。他要的是使政令通過,令中醫執照在一年以後停止頒發,而已有執照的需在三年內接受西醫教育,五十歲上的老中醫最多只能多執業十五年,並廢除中醫教育。這個議案在會議上獲得通過。



廢除中醫案在1929年炸響,引起了全國中醫界一片嘩然。3月17日,全國醫藥團體代表大會召開,會後發表聯合宣言,稱廢止案是「暴法橫加,斷難忍受」。

大會成立了全國醫藥總會,形成中醫藥界聯合陣營,推選出了請願團,並於3月20日晚上趕往南京,向教衛二部呈遞了請願書,終於使廢止中醫案被暫時擱置,但兩部並未改變觀點。

全國醫藥總會再次組成請願團上南京,向國民黨中央執行委員會、行政院、立法院及教衛部門請願,終於驚動了當時的政府主席兼教育部長蔣介石,下令撤消了教衛兩部的命令。但直到現在,社會上仍然有少數對中醫有偏見和誤解的人不斷推動著廢除中醫,而中醫界則以行動說明了中醫存在的價值:在過去的一百年中治癒了無數西醫束手無策的病人;在國內控制許許多多在西方一發不可收拾的瘟疫。

踏入二十世紀末,西方也對中醫的療效感到興趣,並紛紛開始研究中醫。使學界對中醫氣本質、經絡實質、陰陽、五行、藏象和中醫哲學觀等都有了新的創造性的認識和解說。如,鄧宇等發現的:氣是「信息-能量-物質」的統一體;細胞社會學(細胞群)分形分維的經絡解剖結構;數理陰陽;中醫分形集:分形陰陽集-陰陽集的分形分維數,五行分形集-五行集的分維數;分形藏象五系統-暨心系統、肝系統、脾系統、肺系統、腎系統。

展望未來,世界醫學的趨勢,必然是中西醫的合作,來面對日趨嚴峻的疾病形勢。中西醫各有長短,希望中西醫雙方可以放下成見與鬥爭,為病人福祉作為前提。

# 香港的藥劑業

## 專訪：香港藥學會會長鄺耀深先生

鄺耀深先生於1983年在英國完成其藥劑學學士學位課程。他在當地實習完畢後，便回香港執業，並先後於社區藥房、跨國藥廠及公立醫院工作。而他在十五年前更成為香港藥學會的主席，故對藥劑業的不同範疇有相當的認識。在這多年的藥劑生涯之中，鄺先生雖然看到業界存在不少問題，但可幸的是，他認為香港的藥劑業正朝著一個進步的方向演變和發展。

問：藥劑師在正式註冊之後，可以到哪些地方工作？

答：基本上我們藥劑這個專業的出路是相當廣闊的。除了在社區藥房、藥廠及醫院這三個範疇之外，出路還包括了製藥、科研、教育及在政府中負責執法，甚至當取得了律師的牌照之後，更可以專注於和藥物有關的法律事務，如藥物的品牌及專利權等，所以藥劑師本身的出路可以有很多。而因為在讀書的時候學的都只是最基本的知識，所以當藥劑師到了不同的範疇工作的時候，都需要重新學習個別範疇所需要的知識和技能。

問：在上述所說的不同種類的工作之中，藥劑師分別的工作是甚麼？每個工作的範疇又有甚麼特別之處？

答：在社區藥房的藥劑師站在最前線，接觸一些健康的普羅大眾，與醫院之中看見的都是已經患病的市民的情況有所不同。通常這些健康的市民都希望對自己生活的健康有所了解，不同於醫院的病人想對自己的疾病有更多認識。所以，社區藥劑師通常是擔當一個資料發放和提供意見的角色，對一些產品作出評價。現在市面上有很多健康食品及中成藥，所以社區藥劑師對這方面都要有一定的認識，以應付顧客的要求。另外，社區藥劑師在公共衛生方面亦可以作出貢獻。例如在流感高峰期可以提供一些預防疫苗的資訊，或幫助市民計劃戒煙等。而在社區藥房工作的一個好處就是可以學會如何做生意，而這都是在書本或課堂上學不到的。在社區藥房之中，藥劑師可以負責整個藥房的管理，甚至自己成為老闆。藥劑師可以從中學習整個商業的運作模式，如買賣貨物、貨倉管理及談生意的技巧。這些都是一定要在工作的時候才能學到的。

至於在藥廠方面，因為那些國際科研藥廠在香港都沒有支部，所以香港的藥劑師在這方面的發展就局限了些。在這些科研的藥廠之中，藥劑師除了幫助發掘新藥、做臨床實驗之外，最重要的角色就是研究劑型，使藥物更易被吸收。而在這方面工作，藥劑師就比較像一個科學家了。不過，香港的藥劑師亦可以幫助這些藥廠做一些市場推廣、藥物註冊及向醫生提供臨床的支援等。

而在醫院方面，藥劑師主要提供一些配藥的服務。不過即使如此，醫院的藥劑師亦需要留意許多方面事情，而其中一個就是風險管理了。在醫院配藥比較複雜，而且可以說是有很多的陷阱。例如有很多藥物的名稱或外型都十分相似，或者在溝通或書寫上出現問題等等，這些都十分容易成為出錯的原因。另外，

除了配藥之外，藥劑師亦可以負責臨床的工作。現在香港亦開始重視臨床藥劑師在整個醫療團隊之中發揮的功用，好像近期瑪麗醫院中的熱話就是叫做 Medication Reconciliation (用藥協調)。Medication Reconciliation 其實是想協調醫生和病人之間對藥物的掌握，因為很多時候，病人不單只是從醫院中取得藥物。他們在家中實際所服用的藥物和醫院中所記錄的並不一定相同。而藥劑師就可以發現這方面的問題，令醫生更能掌握病人用藥方面的情況，亦可以教導病人在出院後如何繼續用藥。另外，臨床藥劑師的服務亦包括處理



病人對服藥方面的困難。現在有一些Warfarin Clinic已經和醫生達成一個議定，就是當藥劑師看了測驗的結果之後就可以幫助醫生調較劑量，從而減輕醫生的工作量。

在製藥這方面，藥劑師當然是負責藥物的成份、功效等等。但另一些可以做的，就是控制藥物的品質，如保證環境的衛生、水質、空氣質素及文件都符合GMP (Good Manufacturing Practice)的要求，令產品一旦出現問題的時候，可以盡快作出回收。

至於在政府工作這方面，主要是關於執法。而執法方面，則主要分為兩個範疇。第一個是藥物的註冊。香港所有的藥物都要在衛生署註冊，才可以合法地出售。任何對藥物的改動，包括包裝、外型、成份、指示、副作用及產地來源等都要知會衛生署，然後再重新註冊。藥劑師就可以在這方面負責做一個把關的工作。

而第二個範疇就是督察，例如巡查社區及醫院藥房、藥行、製藥的藥廠和批發商等。有些時候，衛生署亦會聯同警方及海關打擊一些偽藥或次等藥物，甚至會有一些俗稱「放蛇」的行動，打擊一些違規的行為。

而教書、研究這些就很明顯了，我也不用多說了。

問：既然藥劑師可以在這麼多的方面發展，那麼藥劑師在不同範疇的人數比例是多少？

答：以香港現在的分佈，社區藥房所佔的比例應該是最多的，大約有五百個。其次是醫院，約有四百多人。之後是藥廠，有百多人，再之後就是製藥廠，有幾十人，而在政府做執法的亦有幾十人。所以大部份的藥劑師都是在社區藥房及醫院工作的。(編者按：藥廠主要負責科研，而製藥廠則主要負責製造藥物)

問：那現在香港藥劑師的人數是否足夠？港大在來年將新增藥劑學士的課程，會否令藥劑師的人數過盛，還是剛好可以紓緩人手不足的問題？

答：足不足夠是視乎社會的需求的。如果單

用藥劑師對市民這個比例來計算的話，香港相對起周邊的東南亞國家或者歐美等先進國家來說，是十分不足夠的。如果是按實際的工作來說的話，到這一刻為止，香港還沒有多餘的藥劑師。至於要增加多少個藥劑學額，就很視乎我們的發展空間了。好像如果醫院要擴展臨床藥劑師的服務，或者要令藥劑服務的素質提升的話，需求當然可以很大。舉例說，以前在醫院是沒有二十四小時藥房服務的，但現在則有七間的急症室藥房有二十四小時服務。如果全部有急症室的醫院都要有這項服務，則可以多聘幾十人了。又或者剛才說的Medication Reconciliation，令病人清楚知道如何服藥，使療效更好，減少病人再次入院的機會。如果這個服務得以繼續推廣，即使每間醫院只增聘幾個藥劑師的話，已可以提供幾十個職位。所以你這個問題，我真的好難回答到底是夠或是不夠。

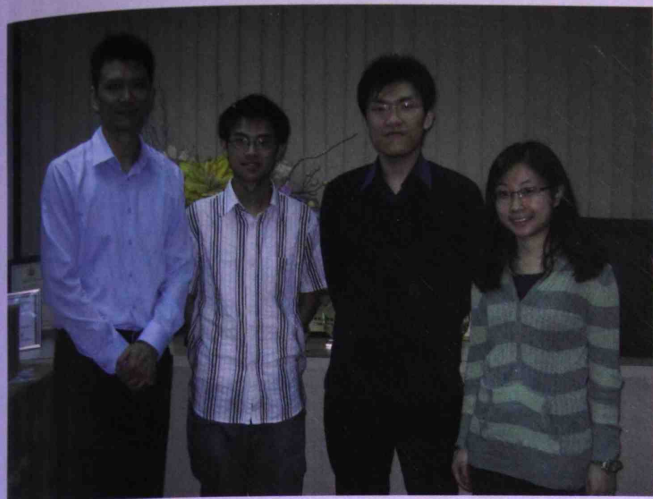
但我深信，如果社會上有多些藥劑師的話，我們發展的空間將會更加大。要是我們要實現「醫藥分家」這個夢想的話，當然要有足夠的藥劑師。所以，「醫藥分家」是不可能一夜之間發生的，應該是循序漸進，而不是一步登天，一下子改變現有的制度。我和一些醫生閒談的時候都經常強調，「醫藥分家」只是一

件工具而已，而不是像傳媒渲染所說般是醫生和藥劑師之間的利益衝突。如果社會覺得需要這件工具的話，那我們就去實行了。但若要實行的話，就一定要計劃地進行。

問：那你覺得香港是否需要「醫藥分家」這件工具？而實行了之後，有甚麼好處和壞處？

答：我一般都會用「紅綠燈」來比喻「醫藥分家」這件工具。我們是否實行「醫藥分家」，很視乎我們對自己的安全有多重視。你可以隨便在哪兒過馬路，但如果我們能夠依著交通燈的指示去過馬路的話，就安全多了。同一道理，如果我們有「醫藥分家」的話，我們吃藥時便會安全一些，但卻會覺得麻煩，正如你要走到紅綠燈處等候過馬路一樣。至於有人說實





行了「醫藥分家」以後，藥物的整體價格會上升，我就不同意了。其實「醫藥分家」是否要實行，很視乎香港的市民認不認識這件工具。我相信很多市民在外國用過這件工具的話，都不會反對「醫藥分家」的，因為他們都知道它的好處。但香港人比較重視方便和快捷，很多事都要像即食麵一樣，所以市民對此的接受程度就是一個問題。但可以肯定的是，有「醫藥分家」這件工具，一定比沒有的好。

問：你之前說社區藥劑師需要有市場學的知識，那你覺得港大將推出的藥劑學學士學位課程，應否增加這一方面的課程？另外還有沒有別的科目是需要增加的？

答：市場學的知識是有用的。一個藥劑師不論去到哪裏，都一定需要做一些生意上的計劃及建議，所以這方面的知識對藥劑師來說是十分有幫助的。而我個人覺得藥劑這個課程，除了本科的課程之外，溝通的技巧亦是必須的。很多時候，藥劑師如果太過著重學術成績的話，就很容易會忽略了溝通。而藥劑師的服務，卻經常要與病人及其他醫護人員溝通。所以市場學和溝通的技巧是對一個藥劑師十分重要的。(編者按：港大新增的藥劑學學士學位課程，正好著重病人輔導及溝通技巧，並設有「藥物經濟及醫療金融」(Pharmacoeconomics and Health Care Financing)的科目可供修讀。)

問：你在介紹自己的時候說過在這幾十年間見到藥劑業有不少的問題。到底這些是甚麼問題？

答：問題就一定有的了，沒有問題一定是假的。第一個問題就是個歷史的包袱，例如香港現在有藥房又有藥行，十分容易令市民混淆。另一個問題就是我們香港的教育。如果我們留意一下外國，就會發現外國人在醫藥上的知識是比較好的，這可能是與他們在中小學的教育有關。所以，我覺得香港在藥物教育這方面，

還有很大的進步空間。還有的問題就是藥房的運作時間、擁有權、藥物法例的落後等，這些都是我覺得有待改善的地方。

問：那可否簡單的說說藥房和藥行的分別是甚麼？

答：好的。香港其實是一個很特別的地方，你可以在兩個地方購買到藥物。第一個地方是藥房，即是有個紅十字(見圖)的地方。藥房的定義就是一定要有一個註店的藥劑師。而只有藥房才可以配醫生的藥方，亦只有這裏可以售賣一些Part I Poison(第一部毒藥)\*，即是要藥劑師監督下銷售的藥物。至於藥行，就是沒有紅十字的地方。它們可以售賣一小部份的藥物，包括一些非處方藥物及Part II Poison(第二部毒藥)\*\*。而另一個規定就是藥行是不可以散裝出售藥物，一定要原裝售賣。這是因為這些地方沒有一個專業的人士在場，所以店員只可以靠藥品包裝上的資料去售賣。要是藥行散裝出售藥物，那就即是配藥，是違法的。

\* 第一部毒藥分為「未列入附表」(Part I)、「附表1」(Part I S1)和「附表3」(Part I S3)三種。Part I Poison必須要在註冊藥劑師在場下的指定地點出售；Part I S1除了受Part I Poison的條例限制



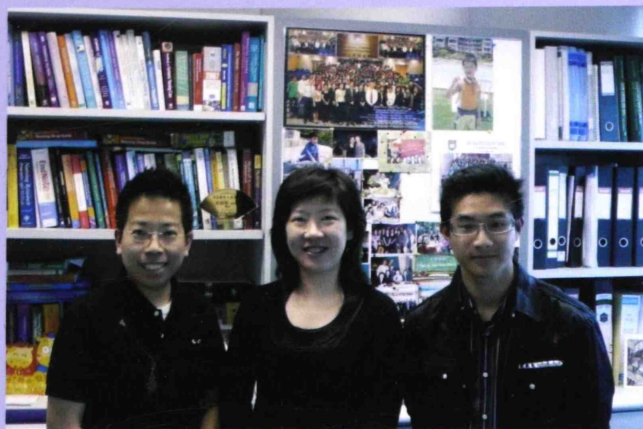
藥房的紅十字標誌

之外，還要註冊藥劑師親手交給顧客，並須記錄顧客的資料，再由藥劑師及顧客簽署；Part I S3的監管則比Part I S1的更加嚴格，除了要受Part I S1的條例限制之外，還要有醫生的處方才能出售。

\*\* 第二部毒藥可以在藥行出售，因為它比第一部毒藥的副作用少，相對較安全，例如Piriton(百利通)(主要成分為Chlorphenamine氯苯那敏)。另一些比較具爭議性的藥物則包括舊式的口服避孕藥及戒煙香口膠。

# 梁綺雯博士專訪

梁綺雯博士於一九八八年成為香港註冊護士，其後於香港大學攻讀並取得社會科學哲學博士學位。現時梁博士除了是護理學系的助理教授外，還擔任護理學系一年級的Coordinator及醫學院的助理院長（學生事務）。相信護理系同學都對梁博士頗為熟悉，覺得她為人和藹可親，熱心教學。而今次就請到梁博士分享一下她工作上的經驗以及對護士學校重開的看法。



問：有甚麼原因促使梁博士從一位普通護士轉為助理教授？

答：我至今從事護理工作剛好二十年了。還記得當年只有很少大學學位，而且還未有護士學位課程，所以我中七的時候就於護士學校接受培訓，畢業後到瑪麗醫院的半深切治療部工作。大家都知道深切治療部是由一個護士照顧一個病人，而半深切治療部就是由一個護士照顧兩個病人。我在那裡工作了一段時間後，就下定決心到澳洲修讀護士學位，因為我想知道更多的護理理論及海外護理行業的情況。當我完成學位課程後，我想多了解整個醫療架構，所以便跑去修讀醫務行政碩士課程。在修讀途中我認識了很多從事不同醫護範疇的同學，大家在討論醫療行政管理的過程中互相交換意見，令我獲益不少。碩士畢業後我就想接觸一下臨床以外的工作，於是便去做研究員助理，最後就去了大學教書。而推動我攻讀博士學位的原因是得到家庭的支持，因為我想為我兒子作好一個終身學習的好榜樣，令他知道讀書的好處。

問：甚麼年級才能申請TUNS(Temporary Undergraduate Nursing Students 學護臨時職位)？

答：以前TUNS只接受三至四年級的學生申請，但由去年開始已經接受二年級甚至一年級的學生申請。我認為TUNS是一個讓學生體驗一下臨床環境的機會，不過同學做TUNS時就應該打起十二分精神，因為這個時候大家的身份是由學生變成員工，責任亦隨之增大。如果同學能應付學業方面的話，做TUNS亦未嘗不可，但若個別同學只能勉強應付學業的話，我就不太贊同這些同學做TUNS。還記得我在澳洲讀書時，當地政府規定護士學生不能做超過17小時的兼職。我很贊同這個制度，一方面是因為學生的主要責任是讀書，應該先學懂基本的知識，而另一方面亦可減少學生犯錯的風險。

問：醫管局招收TUNS時會否有一些成績的特別要求？

答：以我了解，醫管局是不會看學生成績的，但會因應學校、年級來分配病房。但因為現時人手短缺，所以同學們有機會被分派到一些較繁忙的病房內。若同學遇到未學過的護理技巧或並未得到足夠指導的話，犯錯機會就會大大增加。

問：近年護士學校重開，你對此有甚麼看法？

答：我認為這是一個很錯很錯的決定。我不是說歷史不能走回頭路，但我們要從歷史中學到甚麼是對與錯。對的當然要繼續保持，但重複犯相同的錯誤就是很傻了。重開護士學校是為了增加病房工作人員的數目。如果護士學校沿用舊的學徒模式教學，學生往往只懂護理技巧卻不了解背後原因，有時候甚至在技巧還未純熟時就便要到臨床實習，這實在是太危險了。有很多研究顯示，大學內各項的訓練有助培訓



護士的獨立思考能力及加強準確的臨床決定，而學術式的訓練並不能訓練出一個能獨當一面的優秀護士。其實現時很多簡單的護理工作如量血壓、整理床被等已交由健康服務助理 (Healthcare assistant) 負責。要是為了增加人手的話，倒不如增加健康服務助理的數目，讓專業護士帶領他們工作。其實增加護士人手還有很多方法，最重要是建立好護士的形象，吸引更多有志之士加入，不一定要重開護士學校，所以我認為開辦「健康服務助理學校」比重開護士學校更好。

問：那護士學校與大學的護士學位課程有甚麼分別？

答：正如我之前所講，護士學校著重技巧而缺乏理論，所以兩者之間其實有很大分別。大學的護士學位課程會提供一個全面的教育，當中除了著重護理技巧外，還教導學生技巧背後的理論及知識，同時亦訓練學生的批判性思考、管理及領導能力等等，而這些都是護士專業不可缺少的訓練。

問：會否因為重開護士學校令市場飽和，使大學畢業生找不到工作？

答：我並不擔心大學畢業生找不到工作，特別是我們香港大學的學生，因為他們具有很好的英語水平。基本上全球同樣面對護理人員人手短缺的問題，所以同學們可以到澳洲、加拿大、美國等地發展。我自己有澳洲的護士執照，而澳洲當局亦經常來信邀請我回去做護士。所以，當同學有良好的英語能力及領導才能時，根本不用擔心失業的問題。隨著香港的醫療架構擴大，人手需求增加，我們的同學將有很高的市場價值。其實除了緊急護理 (acute care) 外，同學們還可考慮參與基層護理 (primary care)，當中包括健

康教育及健康推廣等工作，因為在基層護理的範疇裏很需要一些能獨立思考的護士擔當領導角色，教育市民。其實，同學們還可趁年輕、家庭負擔較少時嘗試一下臨床以外的的工作。我記得當我修讀完學位課程後，也不是第一時間返回病房的崗位。為了增廣見聞，我曾加入商業機構參與行政及市場學工作。那時的工作倒是很有趣，我也是運用護理學的知識及科學研究的結果協助策劃產品和市場推廣。所以，當同學有了一個大學學位之後，便會有很多選擇。

問：醫管局如何分派新入職護士？

答：以我所知，醫管局會以聯網的形式聘請護士，同學可以選擇不同分區，例如港島區等。選擇好聯網後醫管局便會以小組形式進行面試，而在面試當中同學亦可選擇自己心儀的醫院和部門。當然有時醫管局不一定可以根據同學的意願而分派。可是，同學不必因為派不到自己喜歡的部門而灰心，以我所知醫管局會安排新入職護士到不同類型的醫院和部門工作，以獲取不同的經驗及進行培訓。我不希望同學因為不能到自己喜歡的部門工作而辭職，因為做人應該要有毅力，有毅力才会有成功的機會。以我經驗，一份工作可能需要五年時間才真正熟悉、明白工作的本質。所以某些同學在一些醫院工作三個月就辭職，還未認清自己的角色便離開，實在是很可惜。所以我建議同學應該堅持，因為頭一、兩年的工作是最有動力及最有挑戰性的，應該好好去享受一下。

問：每年醫管局護士的流失率都很高，同工不同酬是否其中一個原因？

答：我覺得大多數資深護士離職並非薪酬問題。現在護理行業缺乏晉升機會反而會是離職的主因。因為護士職位的架構尚未穩定及清晰，使很多同事有挫敗



感，感到前境渺茫。另外，由於有很大百分比的護士都是女性，她們到了某個歲數便會結婚或要照顧小孩，所以很多人會選擇在結婚後離職。我很少聽見有同事因薪酬過低而離職。如果真的是因為薪酬問題而辭職的話，我相信他們會到另一間能提供滿意薪酬的機構。我認為大多數的護士並不是為了薪酬高低而工作。很多時候，工作上的滿足感，多勝於金錢上的回報。



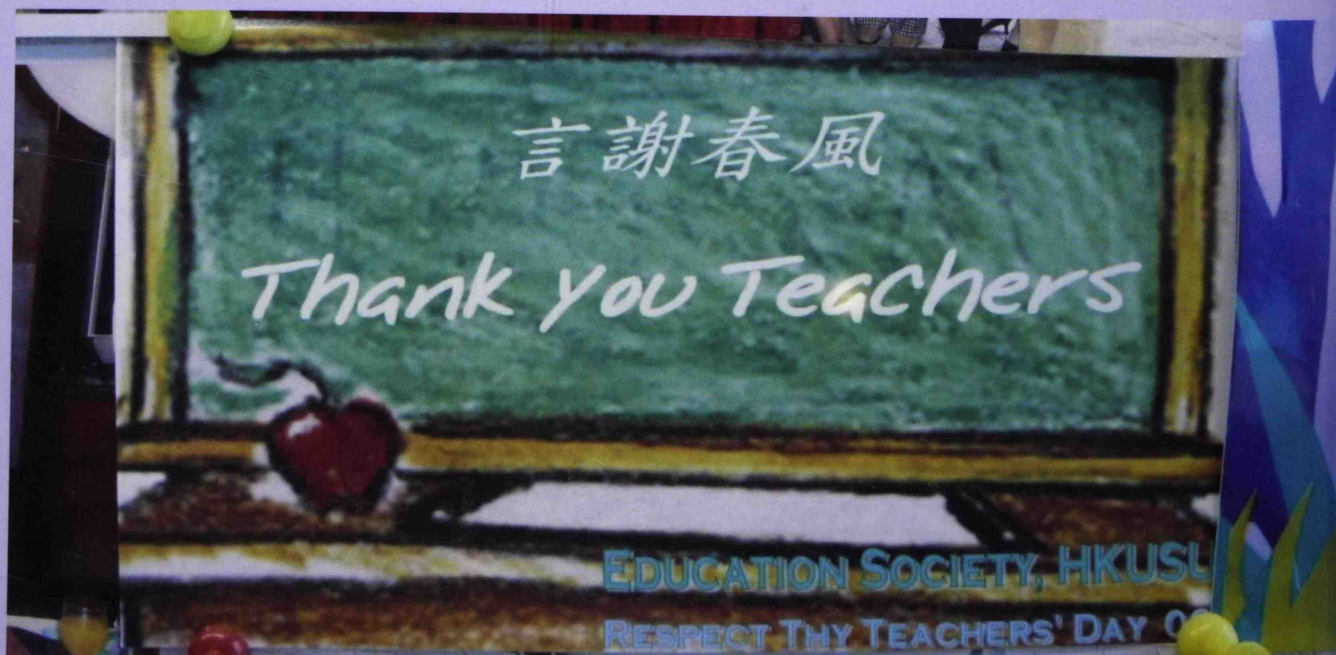
問：是否為了家庭而令你從事教育工作？

答：不是。我仍很喜歡臨床護理工作，而我亦隨時準備返回臨床護理崗位。記得剛到香港大學工作時，我就帶同學們到醫院實習，我認為臨床護理工作是很有趣、富有挑戰性及很有滿足感的一件事情。我從事教育工作最大目的是訓練下一代的護士，盡可能將我的知識傳授給他們。雖然教育工作有時候會令我很有挫敗感，同學有時會「唔聽話」，令我覺得白費心機，但我有時回想一下：一個人在護理工作上做得好是沒有用的，若我能訓練出一班又一班護

理精英，便會有更多病人受惠。在家庭方面，我反而認為是他們促使我繼續從事教育工作。經歷孩子的成長，令我深深感受到每個人的學習過程都有不同。有時需要鼓勵、有時需要提點指正。我相信護理系的同學同樣需要這些支持。

問：那你對同學們有甚麼期望？

答：我對同學們有很多及很大的期望。我希望同學不要只顧讀書，應該要多和其他學系的學生溝通。以前我在護士學校讀書時，很羨慕其他考入大學的同學，因為他們可以接觸不同學系的人，但在護士學校裡只能接觸同一類人，話題總離不開病人，令我覺得很悶，視野也很狹窄。所以同學應該要多加探索、多與其他學系的同學接觸、多上通識教育課。





# 明知故問

我把家中的大門打開，甫一進屋，便見小狗的伏在地上，強作鎮定，努力地掩飾著自己興奮的心情。可是，無論牠樣子是怎樣的鎮靜，表情是如何的冷漠，牠的一條尾巴，卻把牠的心情徹底出賣——那像裝了馬達一樣高速搖擺的尾巴，頻率高得難以想像，教人怎會不知牠的心意？我再踏前一步，的的就再難控制牠的情感，一下子向我全速奔來，然後就在我腳下蹦蹦跳跳，像要跳進我的懷裏一樣。我見牠這樣熱情的歡迎我回來，也不忍心要牠失望而回，於是便把牠一抱入懷。但抱著並不能使的的滿足。牠雙手在我身前亂爬，然後後腿發力一蹬，整個身子就向我的臉上撲來。我心知不妙，身子立即向後一退，卻依然閃避不了這突如其來的一擊，面上就被的的親了一口，真的叫我不知該怒還是該笑。為甚麼我每次回家，牠總是這樣興奮的呢？但每次見到的的如此記掛著我，我的心便立時泛起一絲暖意。

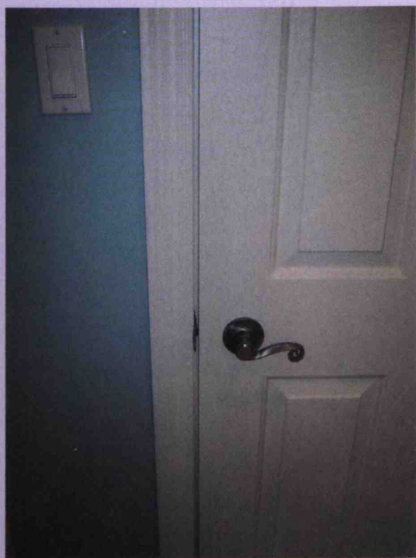
「你回來了嗎？」一把熟悉的聲音傳進了我耳中。我沿聲望去，便見母親正坐在沙發上面，看著那些只有她一個會欣賞的韓劇。

我喃喃的應道：「明知故問。」說罷便回到房中，關上了門，與家中的一切隔絕。

正當我強記著一大串藥名，心中正自煩躁之時，門外卻不斷傳來了一陣陣的噪音，使我更為心煩，便在房中叫道：「別吵！」

過得一陣，門外果然再沒有半點聲音，卻是有如死寂一般。我心中有股不祥的預兆，就像動物知道將有天災來臨一樣的忐忑不安，極不自然。我放下手上的筆記，走出廳中要看個究竟，卻見那兒一個人也沒有，只有的的一個對門而坐，若有所思。我正想到母親房中去找，一轉身，便見飯桌之上留有一張字條，寫著：「心臟病發，到了醫院，不用擔心。」

這字條當然是母親留給我的了。在我的腦海裏，瞬即浮現了幾年前的一件往事：某年的一個晚上，母親的心跳得出奇的快。父親（是



個醫生)曾對她作頸動脈竇按摩(carotid sinus massage)，雖然是暫時把心跳減慢了，但到了深夜，母親的病又再發作，父親於是匆忙的把她送到醫院的急症室。據母親事後憶述，當急症室護士替她量度心跳的時候，竟然錄得每分鐘一百八十多次，連那經驗豐富的護士也不禁大吃一驚，在那老練的眼神之中發出一絲奇異的目光。後來醫生替母親打了一支針之後，她的情況便改善了不少，而這個病亦從此再沒有發作，可是到了現在，病魔卻又再出來作祟了……

一想到母親的病，一股寒氣倏地就在我的內心深處冒起，然後向外迅速擴散，將我整個人都包住。我在想，在甚麼時候，我竟然變得這樣不聞不問，與母親變得疏離？我回首看著自己的房間，發覺飯桌離那兒只不過是幾步之遠……可是房門卻是關著的。剛才我在房中走出來，卻下意識地把房門關上了。我怔怔的對著這道房門，終於理解到母親病發時的想法。她嘗試找我，可是她卻碰到了這道房門。她看不清房門後的我，到底在做些甚麼，煩些甚



麼。房門後的我，根本就遙不可及！可是，難道薄薄的一扇木門，就成了我和母親之間的隔閡？

其實真正的一道屏障，是在我的心裏。不知為何，人漸漸大了，便漸漸把自己的感情都鎖在自己的心底，再加上厚厚的一道鐵閘，使它

不再外露，喜怒再也不形於色。不管別人怎樣的窺探，就是看不穿我心裏埋藏著的是甚麼，這叫別人如何知道我的心意？我雖然關心我的母親，卻表達不了這樣的情懷，那這叫做關心麼？

正當我想得出神，忽然被一陣「咕咕」的聲音吵醒。我回過神來，往下一望，原來是的的對我說話。的的一見我望到了牠，便十分高興，又不斷的擺著尾，在我腳下亂跳。我心生羨慕，心想：「我也希望有一條尾巴，讓人們都知道我的心意。」可是，就當我看著的的真摯的目光之際，驀然之間，我忽然頓悟：表

## 誤解中醫三則

### 1 「針灸」與「針、灸」

達自己的感情又有何難？一個眼神的接觸，別人已然知道你對他的重視；一句關切的問候，別人已能感受到你的心意。一切其實都是這樣的簡單，但我為甚麼要封閉著自己？為甚麼要掩飾自己？就像我知道的對我的掛念一樣，要是母親知道我對她的重視，她將是如何的高興？為甚麼我要吝嗇表達自己的情感？

我不知道背後的原由，但我知道，現在是時候打開心扉，讓別人進來，也讓自己出去！

夜幕低垂，已是子夜了。我獨個兒坐在廳中，心中惴惴不安。之前我接到父親的來電，說他一下班便會順道接母親回家。可是他八時下班，怎麼到了十一時半，也還未有回家呢？是不是有甚麼的不測？難道真的是「愛得太遲」？

我一直對著大門的大鐘，看著時間一分一分的過去。突然，門外傳來一陣人聲，然後大門隨即打開，一張我記掛的臉就映在我的眼簾底下。我和的的一樣，都是喜上眉梢，笑道：「你回來了嗎？」

母親似笑非笑的，回敬了我一句：「明知故問。」

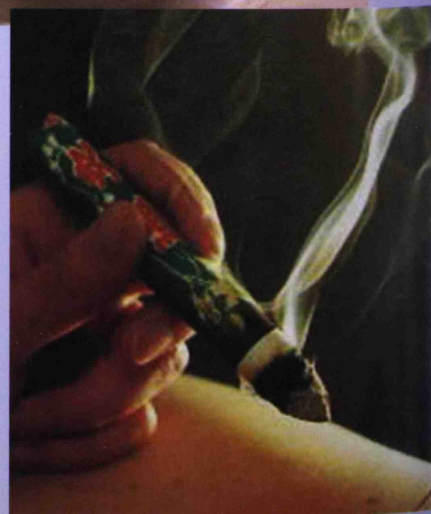
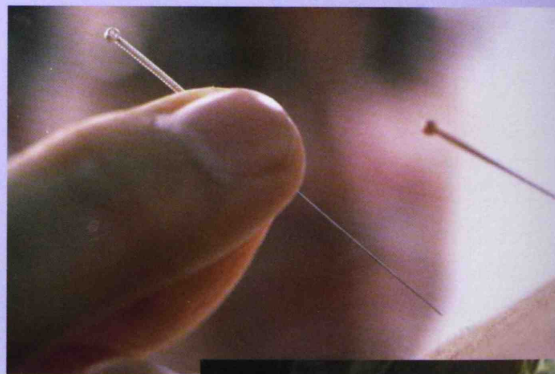


後記：母親的病為Wolff-Parkinson-White Syndrome，醫生說可用手術的方法根治，但母親至今都認為這病沒甚麼大不了，見一年只是發作一次不夠，便不了了之。

很多人認為針灸就是利用一根幼小的針針刺在人體穴道上的治療方法，然而，這個理解只對了一部份。事實上，針灸包含了兩種形式，分別是「針法」和「灸法」。

「針法」，猶如先前所述，就是指利用針刺的方法刺激人體穴道以達到治療效果的治療方法；而「灸法」則是把點燃的艾草，放在或懸垂於選定的穴位上溫烤，利用所產生的熱力刺激相應穴位，以達治療之效的一種治療方法。

至於兩者的治療機制，或許可以用簡單的中醫學概念為你們解釋。根據中醫的角度，人體是由精、氣、血和津液四種基礎的東西組成。當中的氣、血會在體內的「經絡」裏運行。正常個體的氣血運行應是通暢無阻，但當有病邪外襲，經絡便會變得阻滯不通，引起身體不適。而針灸的作用便是要刺激這些阻塞之處，加強氣血循環，使之回覆正常。



## 2 推拿與按摩



我們的師兄在國內實習的時候曾經有以下的記趣：

「我已（為病人推拿）推到汗流浹背，一位新病人又著腰，懶洋洋的扭進來。

上下打量過我們幾個後，他選中了我老師，問道：

『師父，幾錢一個鐘？』

主任一臉無奈。

『唔係用鐘頭計？』」

推拿是中醫的其中一個治療方法，因此費用是以整個療程去計算。那位病人誤以為推拿跟按摩是相同的東西，所以才鬧出這個笑話。

其實，「推拿」是以中醫理論為指導，利用各種手法或特定肢體和特殊器械的活動，作用於人體的穴位或部位的一類舒緩或治療疾病的技術；「按摩」則是透過運用溫柔和緩的手法作用於人體部位上的一種技術。主要分別在於「推拿」是中醫的外治法，而「按摩」只是普通的一門技術。於感覺上說，「按摩」的過程通常可使被按者得到舒緩鬆弛的感覺，而「推拿」則未然：可痠，亦可痛。但要注意的是「推拿」者必需要經過專業訓練，就如註冊中醫師和推拿師，因為「推拿」中穴位的按壓和筋骨的拉扯等動作會對病情有所影響。

## 3 把脈斷證？

在電視劇集中，大夫很多時候會利用三隻手指在病人的手腕上診察，並在數秒之內結論出病因，對疾病作出相應行動。看畢，我們或許會感到驚奇，以為該大夫耍了甚麼法術，以得悉病人體內的病況。其實劇集的編導只是為了節省成本，把大夫辨證的過程縮短拍攝，因此你們別把中醫的診斷技術神化，因為單憑脈搏的跳動是不能準確地辨出證候，如《醫宗必讀》所云：「不知自古神聖，未有捨望、聞、問，而獨憑一脈者。」，所以要有效辨證就必需運用中醫四診：分別是望、聞、問及切。

「望」，是運用視覺觀察病人整體或局部表現的變化，如望舌、望面色等；「聞」，是運用聽覺或嗅覺以了病情，如聽呼吸聲、嗅口氣等；「問」，是透過與病人溝通，詢問處及了解病人的不適，如問痛症、問寒熱；「切」，是利用觸覺對病體某部位進行按壓觸摸，了解病情，如把脈、按腹等。

在中醫診斷學中經常強調「四診合參」這個原則，即是各個診法要相輔相成以綜合各方資料作出診斷，而不能個別獨立其中一個診法，並直接利用其結果作為診病的證據。因此，若然方間有醫師言道能單憑切脈斷症，那該「醫師」或是騙徒一名，或是「黃綠醫生」一名。

不論中醫或西醫，在為病人進行診斷的時候都需要在不同的方面搜集證據，以作出準確的診斷，這才對得起自己的專業、對得起自己的病人。



# 中醫春夏養生

冬去春來，想不想在這個萬物蓬生的季節令自己更加精神煥發，神采飛揚，使身旁的人都被你的魅力所吸引？今天會為大家介紹一下春夏養生之道。

中醫將一年分為春、夏、秋、冬四季，今天就講一下四季的養生之道。

「春夏養陽」的養生原則，就是人體通過調整心理、飲食、行為、運動來順應自然界陽氣變化規律的一種養生的方法。

中醫認為，春屬木，與肝相應。肝主疏泄，疏，就是疏通，暢達；泄，就是排泄，宣泄。春季養生，重要的是從精神層面做到心胸開闊，樂觀愉快，力戒暴怒和憂鬱。春季，人體的陽氣開始上升並趨向皮表，皮表氣血供應增多但肢體反覺困倦，故有「春眠不絕曉」之說，但是睡懶覺並不利於此時的養生需要。因此，在起居方面要求夜臥早起，克服情志上的倦懶思眠狀態，以助陽氣升發。一般來說，為適應春季陽氣升發的特點，在飲食上應當食用辛溫升散的食品，如：棗、花生和蔥等，而生冷之物，則應少食，以免傷害脾胃。

夏屬火，與心相應；長夏屬土，與脾相應，所以在赤日炎炎的夏季，要重視心和脾的調養。夏季要神清氣和，快樂歡暢，胸懷寬闊，培養樂觀外向的性格，以利於氣的通泄。夏季作息，宜晚睡早起，以順應自然界陽盛陰衰的變化。「暑易傷氣」，炎熱可使汗泄太過，令人頭昏胸悶、心悸口渴、噁心甚至昏迷。所以活動時，要避開烈日熾熱的時間，並注意防曬。夏季出汗多，則鹽分損失亦多，因此適宜多食酸味以固表，多食苦味以補心，甘味以補脾。夏月伏陰在內，故飲食不可過寒，如《頤身集》指出：「夏季心旺腎衰，雖大熱不宜吃冷淘冰雪，蜜水、涼粉、冷粥。飽腹受寒，必起霍亂。」夏日外熱內寒，故冷食不宜多吃，貪多定會寒傷脾胃，令人吐瀉。西瓜、綠豆湯和酸梅湯為解渴消暑之佳品，但不宜冰鎮。夏季氣候炎熱，人的消化功能較弱，所以飲食宜清淡不宜肥甘厚味。

## 春季食療

主去濕養肝，補氣養血，振奮精神

1. 素食補氣茶：黨參、雲苓、白朮、龍眼肉、紅棗，洗淨放入煲內，加入清水，煲滾，用中火煲15分鐘，熄火焗30分鐘，再用中火煲10分鐘，熄火，代茶飲用。

2. 夏枯草清肝茶：將夏枯草、茅根（乾）、山梔子三錢，紅棗（去核）洗淨，加水，煎約四十分鐘，加糖調味即可。

3. 香附玫瑰柔肝茶：將香附加水，以大火煲滾後轉文火煎二十分鐘，隔渣後加入玫瑰花焗約五分鐘，加糖調味即可。

## 夏季食療

主清熱，利尿健脾利濕，安心補脾。

1. 鹽薑茶：綠茶、食鹽、生薑，放在沸水中浸泡片刻即成。喝鹽薑茶應注意不宜過熱，一般在20℃左右為好，一次不要飲用過多，應少量多次，以免沖淡胃液，影響消化功能。
2. 豆漿粥：將糯米洗淨後放入鍋中，加水適量，用武火燒沸後改用文火慢慢熬煮，煮至米粒開花時倒入豆漿，繼續熬10分鐘，最後加入適量白糖作調味。
3. 東瓜粥：冬瓜、粳米加水至粳熟透。

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# Feeling The Pulse Of The Economy

"An inferior physician treats diseases, a mediocre physician treats patients, a superior physician treats the nation (下醫醫病·中醫醫人·上醫醫國)", says our ancient Chinese wisdom. This has been shown to be true even in today's globalised and sophisticated society, for the principle of running a vast country is no different to that of treating a patient. Interestingly, the philosophies of Chinese Medicine and Western Medicine – physiology, to be specific, could be applied to analyzing economic theories, if not designing economic policies. This article may offer a glimpse of how medicine could possibly serve a seriously ill patient – the economy.

## The mystery of flow

Flow is important in all systems. Physiology concerns blood flow, and health in Chinese Medicine (CM) depends on the flow of Qi (氣). A retail shop owner preferably wants his business situated in an area with a large flow of potential customers. A river that does not flow is dead water, clotted blood is just waste and the stagnation of Qi causes diseases. The same is true for the economy. A good economy is all about the flow of money.

Let's examine the basics of the business mode of a commercial bank. You go to a bank to place your deposit, and the bank lends your money (after leverage) to other borrowers. The bank makes profits from the disparity of interest rates. "Money in, money out". As long as there is money (cash) flow, the bank is in good health. When nobody puts money into the bank or no business owner borrows money, the lack of cash flow can kill a bank in days. The bank run of East Asia Bank last year and the government's nervous reaction was testimony to this phenomenon.

This is also true for the whole economy. The financial sector is particularly important as it is comparable to the circulatory system of the human body. The US administration and counterparts in Europe

are directly financing banks because they have to keep the money (blood) flowing in the whole economy. This will not solve the problems, but it at least buys time for treatment and to prevent irreversible damage to private businesses (organs), since many enterprises, no matter small, medium or large, rely on banks to supply immediate cash flow (blood) to maintain daily operation (physiological function). However, the major problem of the US, a country with no financial reserve, is that they are indeed printing banknotes and borrowing money to supply the flow. These all have to be repaid in the next generation. Generation, because in the world of economics, no one is going to donate money (blood) to a sick patient for free.

## Depression and stroke

In Chinese Medicine, diseases are caused by disorder of Qi flow. To maintain a good health, we need an adequate flow of Qi, not too much, not too little. For example, depressive disorder is believed to be a result of Stagnation of Liver Qi. The patient will have a bad mood and other symptoms such as poor appetite. To restore a normal mood, you need a fluent flow of Liver Qi. The Great Depression in 1920s in the US is just the same picture. The confidence of the market dropped to zero and banks failed. There was no money flow in the whole economy. No cash flow means no business, and no business means no jobs. There is no surprise that these unemployed citizens in that period also suffered bad mood and poor appetite.

On the other hand, an excessive flow of Qi is not good either. A sudden burst of Liver Qi can cause stroke (haemorrhagic stroke) where bleeding occurs inside the brain. After the excessive outburst of Qi and blood loss, usually comes the lack of Qi (because of excess loss of Qi). This is an example of "with extremeness comes reversion".



The current credit crunch situation is comparable to a stroke patient. For the last three decades, every financial institution feverishly over-lent money to incompetent borrowers for property mortgages. The market was full of abnormally excessive flow of money (commonly known as "bubbles"). It finally came to the tipping point of outburst and serious bleeding of banks happened as destiny would dictate. The opposite then came and there was no more money flow. This stroke killed giant banks in days: look at Lehman Brothers, Bear Sterns and Northern Rock. To rescue the patient, the Federal Reserve and other central banks then put in huge sums of money to maintain the market liquidity (flow). It is like giving blood transfusion or ginseng to a dying patient to maintain breathing. However, it is just an emergency measure, but not the treatment itself. It takes both time and correct eradication of the cause for a full recovery.

### Price, Pulse and Fever

There are many unknowns in our bodies. No discipline of medicine can fully explain and understand how the body works, just as no economist can explain exactly how the world economy works. Instead, economists observe the price of different commodities as signals and deduce the economic situation at a particular time. The importance of monitoring "price" as signals to an economist is the same as that of "feeling of pulse" to a CM doctor. By examining the pulse of the patient, a CM doctor can similarly know the big picture of the health condition of a patient.

So, the price and the pulse are both signals, rather than problems.

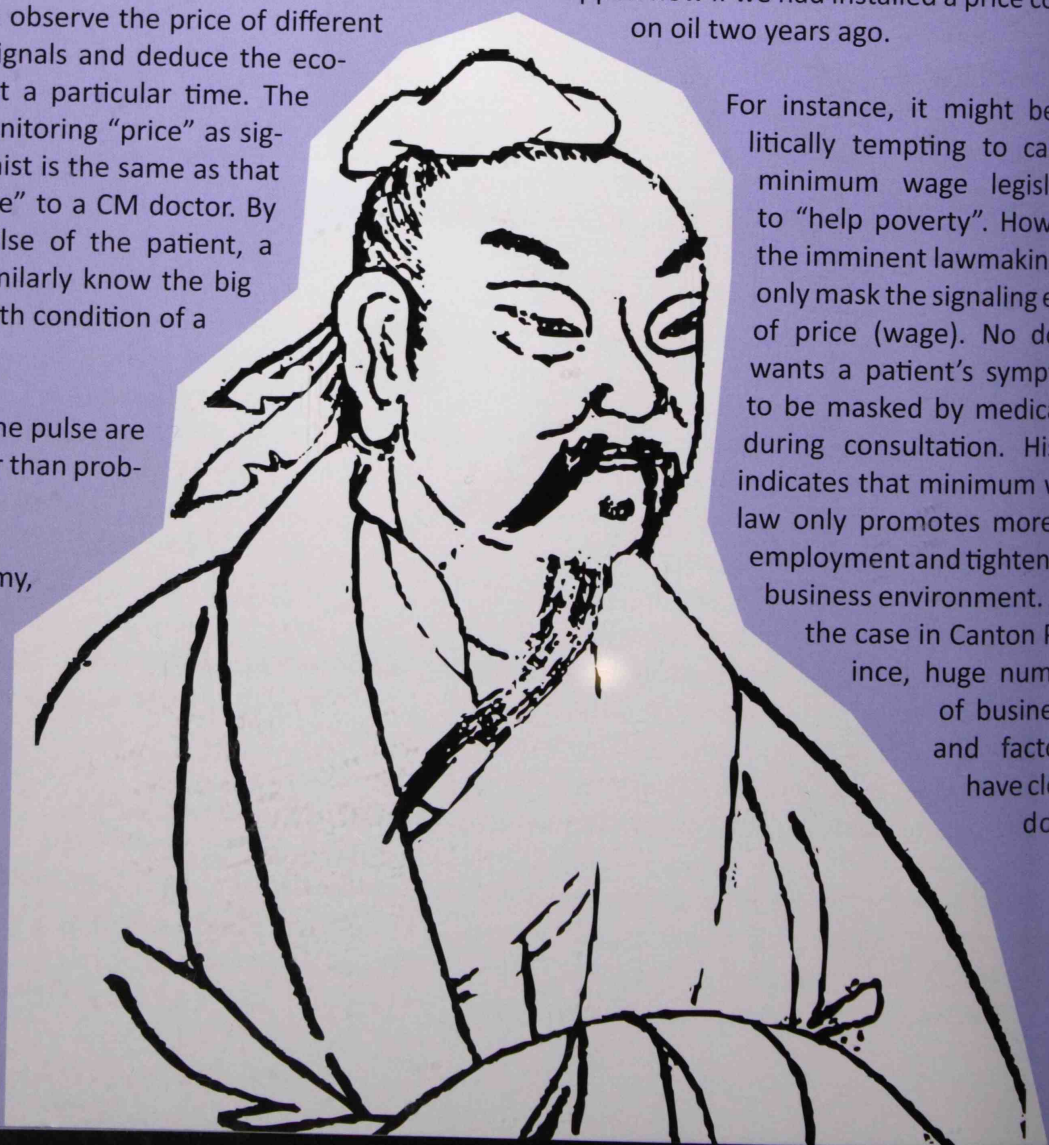
In a market economy, the economic activity is a spontaneous order of different individuals. Price is a market signal that represents the balance between supply and demand, just as your body temperature re-

flects the balance between the immune system and pathogens. As the price rockets, it is as if the body is suffering from a fever. It is useless to put on price control and similarly it does not help to keep taking antipyretics to suppress the fever. Instead, policy makers shall remove the obstacles between the balances of supply and demand and let the market work by itself! Similarly a doctor has to find out the cause of the fever and to restore the temperature regulation. This is the basic principle of Yin-Yang (陰陽) balance too.

### Inflation and Minimum Wage

The surge in oil price in 2007 and the recent plummet only told us about the supply and demand balance of global oil distribution. It is not the problem itself. There was a growing demand last year in Hong Kong to put price control on oil to "control inflation". The negligence of the fact that prices are signals can lead to disastrous consequences, like what happened in the mainland now and in the US in the 1970s. In both cases there were shortages of oil supply and there were huge rebounds in oil price in black markets. No one could imagine what would happen now if we had installed a price control on oil two years ago.

For instance, it might be politically tempting to call for minimum wage legislation to "help poverty". However, the imminent lawmaking will only mask the signaling effect of price (wage). No doctor wants a patient's symptoms to be masked by medication during consultation. History indicates that minimum wage law only promotes more unemployment and tightens the business environment. As in the case in Canton Province, huge numbers of businesses and factories have closed down,



thus the provincial "lawmakers" are calling to waive the Labour Contract Law enacted last year, to keep the jobs of those workers in place. Minimum wage law causes more harm than good to the poor in the long run.

The recent proposal in the Government Budget to use taxpayers' money to supplement corporate firms, for hiring university graduates with a minimum wage as so-called "interns", could possibly lead to a similar situation. However, policies are sometimes made on political grounds and for short term relief, rather than to provide a long term solution.

It is no coincidence that Hong Kong has consistently been ranked atop the Fraser Institute's annual Economic Freedom of the World report. It takes effort and faith to maintain the free market economy.

### Mountains and fish

The Buddhism teachings said: "Look at mountains for ten years, mountains are not mountains; another

er ten years, mountains become mountains again" (十年看山·見山不是山·又看十年·見山又是山) The more we study, the more we find that every discipline of knowledge is in fact related and can be integrated. Medicine is not about treating diseases only, it is an art used to analyze and solve problems.

Zhuangzi (莊子) said: "To run a nation is like cooking a small fish (治大國如烹小鮮)." Even the smallest skill can be applied to run a huge system, like a country or the economy. To allow Hong Kong to survive this global financial storm, we need talents in the government who can see the whole picture and act in a holistic manner.

Maybe our legislators should really learn the art of Physiology, Chinese Medicine as well as cookery, so that they could realize that in addition to being thrown, bananas can also be of better and more creative use.

香港大學學生會醫學會中醫藥學會內閣鏗鏘堂  
學術秘書 黃耀連

## 馬拉松·中醫

天空一片藍，  
清風送着馬拉松的健兒跑在路途上，  
橙橙的街燈為一羣剛踏入中醫門檻的學子引領，  
健兒、學子相會於維多利亞公園。  
香港大學校友會是他們的紅娘，  
嫁妝是中醫的首本名曲之一推拿。  
馬拉松的健兒回來了，  
中醫的學子迎着凱旋而歸的健兒，  
喧寒問暖，  
談的是馬拉松路途上的風光，  
推拿、針灸、中醫的學科也使我談得興起。  
學子心中希望為健兒舒緩肌肉緊張，  
誠心在師兄姐的指導下，  
竭盡所能只為健兒得到適時的幫助。  
開眉笑顏是健兒送給學子最豐盛的禮物，  
感謝讚許貼近彼此的心靈。  
風啊，請再為我們的健兒送上涼意，  
他們需要你的鼓勵。  
陽光啊，請讓我們看見你，  
看見你，讓我們讚嘆中醫的偉大；  
看見你，讓我們不得不加緊腳步去窺探這無涯的學海。  
醫學，為人而設。  
醫學是為人而設啊！  
學習醫學的，願我們攜手為人們呈上最美的醫術吧。



# Euthanasia – When Will The Debate End?

Euthanasia has been a long-time favourite of debaters and possibly one of the most controversial topics one can think of. In a way, it is a very simple topic involving the question of whether one is pro-life or pro-choice. The underlying implication of euthanasia is extremely complex, however, and involves much more than just pulling the plug and ending a person's life.

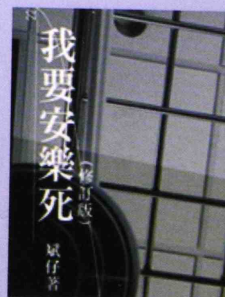
Euthanasia touches on a sensitive issue, namely the opposing standpoint of science and religion. I must clarify that I am not religious at all. This does not mean, however, that I would disapprove of any religion or try to challenge anyone's religious belief: I will try to remain as neutral as possible in what you are about to read. Despite my neutrality, I have to note that this is not the first time that science and religion has collided head-on. Disagreements between them have existed ever since the beginning of science, with the proposal of 'natural selection' by Darwin being the biggest shock so far. This shock rippled down to continuous hostility between the two sides ever since, reconciled only recently when the Vatican expressed the view that Darwin's theory can coexist with the Bible. This claim is curious in the a sense that the Church did not seem to find coexistence of science and religion possible back then, but with the overwhelming supportive evidence which had blossomed over the years since On the Origin of Species, it has become much more unreasonable to engender hostility.

The Church may turn a blind eye towards the fact that we had a monkey as our distant ancestor at some point; but surely they cannot tolerate one thing, and that is euthanasia. We can see that euthanasia had been attacked very violently by anti-euthanasia activists, with the Vatican being one of the loudest voices. This political pressure was so substantial that few countries in the world have managed to pass an act to legalize euthanasia, with the Netherlands being one of the rare exceptions. It is slightly ironic that the voice against euthanasia is strong, but less peo-



ple have protested against wars and genocides occurring at this very moment in some parts of the world, than a controversy involving far fewer lives. More than that, there are several reasons why we should think twice before blindly protesting against euthanasia.

Firstly in euthanasia, the "murder" of a patient requires the assistance of doctors, the guardians to health. Yet, the doctor's role has changed with the development of human civilization. Where once doctors' sole objective is to prolong life, they are now required to bear many more responsibilities. With "do no harm" as the utmost priority of all doctors, the society now requires doctors to also ensure the quality of life of their patients. Now one may say that the principle of 'do no harm' is contradictory to the euthanasia, but first of all we must consider whether euthanasia is actually harmful to the patient. I have been engaged in several debates with those who disapprove of euthanasia. One viewpoint I have gathered is the fact that they believed that one could still experience happiness even if they were suffering from severe morbidity. Another more religious argument is that God alone shall decide how long we shall live and that ending it in any sort of manner is against his wishes.

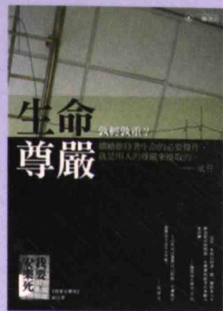


Normal healthy individuals may not understand what these unfortunate souls have to endure; therefore it is unfair to say that their preference to escape pain is an act of defeatism or weakness. It is simply human nature to consider death by euthanasia for terminally ill patients.

Secondly, whereas abortion involves the termination of a fetus that has not actually lived in the world before, euthanasia involves the termination of the life of someone who has lived as an individual, most of them being just as normal and healthy as you and me. This means that whatever caused them to opt for euthanasia, whether it is diseases or accidents, they have, somehow, as a result of the disease or accident, lost part or most of their normal lives. The difference between the two is significant. If one had never experienced happiness, how could one tell



what sadness is? A foetus that did not actually live and have memories and friends is clearly different from an individual who happens to be diseased to the extent that these fundamental constituents to a person's life are taken away one by one. This torture to the mind is just as strong as the physical pain that strikes these people.



Finally, we come to the issue of dignity. One may say dignity depends on self-perception, that as long as one has a positive mindset then one can still enjoy as much dignity as anyone else. However, you can hardly expect those who opt for euthanasia to have such an optimistic outlook of their lives when they choose this irreversible path. Anyone can boast that they can remain optimistic in the face of, for example, being tetraplegic for life. However, saying it now as a 'what-if' is clearly different from experiencing it first-hand. Diseases can eat away one's confidence, morale and determination. The change that can be seen in those who had been tormented by a certain disease for a great length of time can be astounding, where optimism is slowly eroded into despair. It must be noted that choosing to die is a tremendous decision to make in the first place, and that those who made this choice must have had deliberated on this more than one could have possibly imagined. With the exception of those who fell into coma unexpectedly and could not make a decision for themselves, the rest of them have made a choice. Their choice is to end their sufferings and also the sufferings of their loved ones who must endure the pain of having to see them live in such a way. By euthanasia, they can choose when, where and how to die. They can die in a more dignified way without gasping for breath or being hooked up to a urine bag. Instead of dying ten years later when their bodies might be rotting from the lack of movement and their minds might be clouded by pain and boredom, they can die when they are still somewhat conscious and are as whole as they could still be. So the question is, if they made their own decision, by what authority are we depriving them of their power to choose? Are we entitled to have a say in how someone lives? If not, then why are we entitled to have a say in how someone dies?

A recent case in Italy involving a woman who had been involved in a traffic accident 17 years ago

which left her in a vegetative state provoked a new round of protest when the victim's father appealed for an assisted suicide, claiming that his daughter had expressed her desire to die rather than being kept alive artificially. The woman died after the doctors removed her food supply, amidst all the controversies and protest from the public. The Pope declared that this was murder, and ironically, her father can finally stop battling with the courts to end his own daughter's life. However, the story does not end here, as she is definitely not the last or the only one who would seek euthanasia.

Euthanasia has put doctors in a very embarrassing situation. While a doctor may be for or against euthanasia, the patient's right still overrules the doctor's personal belief. Religious doctors may even choose to refer the case to those who are more comfortable on this issue. On the other hand, in countries where euthanasia has not been legalized, whether it be active or passive, or where the laws are ambiguous, doctors have even tougher decisions to make. It is not unheard of where doctors have been accused to have taken part in certain forms of euthanasia illegally, and fortunately doctors had rarely been punished for their actions.

It is easy for those who are against euthanasia to frown upon or insult those who are supportive of it. Ending a human life is fundamentally wrong, so to say euthanasia is wrong cannot be easier. However, to be supportive of an idea that intends to minimize a fellow human being's suffering but requires the premature termination of his life requires much more substantiation. Euthanasia being can be easily subjected to abuse, but the fear of a system being abused can never be an excuse to avoid it altogether. There are those who claim that legalizing euthanasia would cause a negative impact on societal values, but not doing so is even more detrimental to human rights in the sense that one cannot exercise the freedom of choice in their own manner of death. Currently, few places allow people to have a say in their own manner of death. With the Vatican being a rally point for all to continue going against euthanasia, it will be even more unlikely that legalization could be possible especially in predominantly religious countries. Today, the Vatican accepted Darwin's theory. I wonder when, if ever, would the Vatican take a step further to accept that God may not always want his children to suffer in vain.

# 同路——M13基督徒團契

「我們素常彼此談論、以為甘甜。我們與群眾在 神的殿中同行。」 (詩55:14)

「耶和華必在你前面行、他必與你同在、必不撇下你、也不丟棄你、不要懼怕、也不要驚惶。」 (申 31:8)



我們的學長蕭烜醫生在與我們分享的時候曾經說基督徒團契 (Christian fellowship) 是我們最快、最容易得到的 fellowship (又作專科院士等專業頭銜)。我們不需要考試、不需要競爭，甚至不需要通過遴選；只要願意，這fellowship就有如其名——同坐一條船，並將伴隨我們的一生，風雨不改，隨時給予我們愛和關懷。

今年我們M13班初來報到，在開始我們習醫生涯的同時，也在高年級的弟兄姊妹和醫護人員教會的帶領下，開始了每星期一次的週會，為我們的fellowship而努力。Fellowship的意思就是一個友伴的關係，而我們尋求的不單是我們彼此之間的關懷友愛，更是與神之間的靈命成長。

有時候我們只是舉行普通的聚會。開始時唱唱詩歌，輪流分享一下近況和得著，玩一會兒遊戲，午膳閒聊後，再去趕上下午的課。聽起來好像平凡得像是普通朋友的午餐聚會，但這些平靜的共處時間，總會紓緩我們的壓力；閒聊和分享，讓我們了解大家更多。當然我們也有查考聖經的時候。有查經環節的聚會，參加人數往往較少，因為大家都被「查經」兩字嚇壞了。很多未信同學都以為，查經就好像上課一樣，是單方向的灌輸知識；有的則認為這是

專為基督徒同學而設的聚會；有些同學甚至覺得這是一個嚴謹的宗教儀式，參加了便會被迫跟從神秘的規矩……其實信仰雖然是一件認真的事，但這不等於我們要不苟言笑地進行「宗教儀式」。我們不會用強硬的手法去強迫未信同學接受我們所信的；相反，我們最想的，是把自己的生命和經歷與大家分享，希望你們會感受到我們的愛。查經不是要對同學們進行「思想改造」，而是想分享我們所信的。

有時候我們的活動內容對於部分同學可能有點匪夷所思：好像是早前的「齊打羽毛球！鍛鍊胸肺科！」是的！基督徒也會打羽毛球！信耶穌不只是飯前祈禱和週末上教會；我們也會打球、打遊戲機。只是，我們做每一件事，都會與主耶穌一起做。你可能會覺得難以置信，可是祂真的會握著球拍和你一起打羽毛球，也會和你一起在放學後留守圖書館，而你卻不用付出任何代價。即使你還未成為一位基督徒，又或者是天主教徒，你只要邀請祂，祂就會和你一起，陪你看心電圖。你甚至不需要低頭繞指閉眼，你只要開口問，或是在心裡默默的叫喚就可以了。



就在不久之前，我們趁午膳的空檔播放了電影「天作之盒」。這是由早前非典型肺炎爆發期間殉職的謝婉雯醫生的生命故事改編而成的。她的一生從很多角度看起來都令人惋惜，但有時候神就要運用這些生命中的不完美去塑造我們的一生，並祝福他人。當在生命走向最終之時，卻發現一路伴隨著我們的風風雨雨早已停歇，並且已化作美麗的彩虹。我們當中，有些人立志成為外科醫生，又或是兒科醫生，為自己的生命作出最理想的打算。可是在我們打算的同時，神也對我們作了祂完美的打算。這可能會與我們所想的有所出入，甚至完全相反……但到了最後，我們終會明白，祂才是最了解我



們的。因為祂在我們還未認識自己，還未懂得愛的時候已經愛我們，已經明白我們，為我們捨身。我們總是想著要為自己的生命畫上最繽紛、最絢麗的彩虹，卻忘了暴風雨才是彩虹得以出現的關鍵。在這裡跟大家分享片中在重要的情節時都播放了的插曲——「彩虹下的約定」，歌詞是這樣的：

我空虛的心靈，終於不再流淚，  
期待著雨後，繽紛的彩虹，訴說祢我的約定。  
我不安的腳步，終於可以停歇，  
主你已為我，擺設了生命的盛宴。

與祢有約，是永恆的約，  
彩虹為證，千古不變。  
我要高歌，為生命喜悅，  
萬物歌頌祢的慈愛，大地訴說祢的恩典。

聖誕節假期期間，我們舉行了三日兩夜名為「Doctors of Excellence」的聖誕營。進入醫學院是神為我們所作的安排，所以我們都希望學習如何做一個好醫生，把愛傳遞開去。除了有遊戲、沈祖堯教授及一些專科醫生的分享外，我們更有一位特別的嘉賓——患有隱性遺傳的威爾遜氏症(Wilson's Disease)的子淇。在發病前，他成績優異，曾獲無數獎項和獎學金，在他的臉上，總是充滿自信；發病後，以前「瓣瓣掂」的他卻連扭開瓶蓋、甚至連轉身也做不到。在低谷裡，他開始認識那掌握生命的主，病情更奇蹟地（康復的路迂迴曲折，有機會讓他本人詳述）好轉起來。他雖然身患惡疾，卻因此而看到神傾倒的恩典。現在他不但重拾學業，更到處宣講神的大愛。他最後以二胡為我們伴唱「歡欣」這首詩歌。他臉上流露著喜悅，唱道：

今天，心中剛強無懼怕，  
主的豐盛滿一生，  
皆因主手曾為我顯深恩。  
讚美！

早前在伊利沙伯醫院舉行的醫療服侍年會，則分享了很多以基督徒身份關心有需要人士的方法。會中有不少放棄高薪厚職，到第三世界國家服務的醫生分享他們的體會，告訴我們靈命和心靈的健康比身體的更為重要。我們應學習以基督徒醫生的身份去關心、愛護病人，幫助他們康復，同時也要為他們找到生命中的光芒，以及從神而來的平安和喜樂。他們又提醒我們，幫助別人時很容易會產生一種自覺很偉大的錯覺；但我們應時常記得，神賜滿溢的生命給我們，原是要我們將多出來的和別人分享，服侍缺乏的人。

團契活動也有輕鬆的一面，在剛過去不久的農曆新年，我們便進行了包湯圓這傳統的慶祝活動。大部分同學都是第一次包湯圓，所以包出來的湯圓大小不同不用說，更有不同奇特的形狀。很多湯圓餡料太多，芝麻粉跑到外面去，成為灰色的湯圓；有的則因為裡面巧克力糖的色素融化了而被染成五顏六色。幸好煮出來吃下肚後大家都不用被送上QM，可以一起繼續唱詩歌，為共聚快樂的時間感恩。

在這星期剛剛過去的聚會——「勁詩歌金曲」中，我們一口氣唱了多首不同風格，不同內容的詩歌。我們曾在不同時間，用不同心情中唱過這些歌曲，而主耶穌在這些時候都與我們一起。祂是我們的主，又同時是我們的朋友，一直支持我們，毫無保留地愛我們。

「當你正走在坎坷路  
我會伴你在左右  
一起向藍天歡呼  
向白雲招手  
我們一起笑一起哭」

我們和主耶穌，還有我們眾弟兄姊妹之間的fellowship就是這樣，在愛中成長。我們沒法可以每天快樂，每天笑；我們也會跌倒，也會感到氣餒。但耶穌和其他弟兄姊妹會與我們一同喜樂，在我們跌倒時與我們同哭，並伸手扶助。在未來的日子裡，我們衷心希望有更多人與我們同路，一起渡過每一天。

「你的第一個fellowship可以藉：

1. 留意我們的宣佈；
2. 加入facebook上的M13 Fellowship；
3. 找任何一個fellowship的成員

得到！不要再猶疑，  
快點加入我們，與我們同路吧！」



# Is Altruism Declining In Medical Practice? – Report On The Student Debate At The ‘Making Doctors Human’ Symposium, December 2008

A debate was held between two groups of medical students at the ‘Making Doctors Human’ Symposium last December. The author had the pleasure to take part in the event as a debater arguing in favour of the motion ‘That altruism is declining in medical practice’. His teammates included Stephanie Yeung, Timothy Wong, Stephanie Dorothy Yu, Ian Ling and Geoffrey Tang, (MBBS II). The opposition was represented by Damian Mak, Alta Lai and Christy Lam (MBBS V), Eugene Sin, Ann Choi and Vivien Tsui (MBBS II). In this report, the author summarizes arguments from both sides for the reader.

## Proposition



*Team proposition: (from left) S.D. Yu (MBBS II), G. Tang (MBBS II) I. Ling (MBBS II), Professor Doctor Mary Yip, Associate Dean, Y.-L Li (MBBS I), S. Yeung (MBBS II), T. Wong (MBBS II)*

The approach side proposition adopted was to situate the practice of altruism in a historical context through analysis of the vicissitudes of different philosophical and theological systems.

The decrease in altruism within the wider community, therefore, was argued to be an inevitable result of the advent of liberalism and capitalism in modern society. Prior to the Enlightenment, in Western Europe, in the 18th Century, both Eastern and Western cultures were immensely influenced by virtue-based ethics systems that require individuals to act virtuously. For example, in pre-modern China, Confucianism promoted the virtuous man (jun zi) (君子) as the role model of the citizenry. On the other hand, the pre-Enlightened Western world was dominated by Catholic theology centered on

the virtuous Jesus Christ, who famously claimed that ‘to love our neighbours as we love ourselves’ was the greatest virtue of all.

Since philosophical systems are normative standards that guide the behaviour of societies, it follows that medical practitioners, as part of society, are also expected to behave altruistically. That is why, for example, in the Middle Ages, hospitals were mostly run by Catholic monks who voluntarily and selflessly devoted their lives to healing the sick. Similarly in China and Arabian countries, famous doctors like Li Shi-Zhen (李時珍) often risked their lives to test for new drugs and therapies. Altruistic behavior was the common standard held by pre-professional, pre-modern medical practitioners.

In stark contrast, liberalism and capitalism, two modern systems of thought, advocate very different values. Liberalism does not require people to act virtuously. The only actions that it prohibits are those that cause material harm to others. In other words, medical professionals – along with society – are no longer required to do good by law; they are only required to do no harm. On the other hand, capitalism teaches that the objective of life is to accumulate as much material wealth as you can, so it is morally good to earn profit under all circumstances. The success of these two ideologies saw the metamorphosis of medicine from a lifelong vocation arising from man’s fundamental sympathy for his fellow-man’s suffering into a profession, one that is practiced for a living. Modern doctors are now expected to adhere to meticulously laid out standards, while inordinate enthusiasm and passion can only lead to a transgression of the professional code and, consequently, punishment. This institutionalized setting stifles the doctor’s possibility and willingness to act out of altruism.

Side proposition gave a number of examples that illustrate this phenomenon, one of which being the practice of ‘defensive medicine’ in the United States. In ‘defensive medicine’, doctors refrain from recommending risky treatment that may be beneficial to their patients, for they fear expensive lawsuits in case of failure. What they do is to recommend expensive but unnecessary investigations and treatment that neither harm nor benefit the patient in

order to generate extra income for themselves. The advent of medical insurance further entrenched such attitudes. For example, an expensive MRI has already replaced the traditional Chest X-ray as the standard investigation for diagnosis of simple diseases such as pneumonia.

Moreover, proposition pointed to the recent trend of cosmetic medicine endorsed by some doctors. Although these doctors obviously know that slimming does not improve the health of their patients – many of which do not require treatment in the first place – they still continue this practice. Essentially, they involve in the creation of artificial desires that bear no relation to the ideals and principles of medicine in order to extract economic benefits through the satisfaction of such desires in form of cosmetic surgery, slimming and more.

Pharmaceutical patents were also included as evidence that adduce to the complete loss of altruism within the medical arena. It was argued that the death of millions of Africans could be avoided had pharmaceutical companies exhibited the slightest degree of mercy by exempting the unaffordable from paying royalty fees. While ancient doctors offered free treatment to the poor and needy, modern pharmaceutical giants are not willing to forfeit even a small part of their profit to save lives. Such actions, despite being contradictory to any virtue-based ethics system, are perfectly justifiable and infinitely moral in liberal capitalism, since it is always good to make money, and 'letting die' is distinguished from 'killing' and does not incur punishment under positive law. While Catholicism demands that its believers act as Good Samaritans – a failure to comply would most certainly have led to social ridicule in the Middle Ages – liberalism insists that no such duty exists. Capitalism goes further to suggest that being a Good Samaritan is immoral since it works against your chances of accumulating material wealth, the ultimate moral goal of man.

Side proposition, while maintaining that the spirit of modernity- liberalism and capitalism- is at variance with the spirit of altruism, also acknowledged that the latter still occasionally exists. MSF (Medicins Sans Frontieres) volunteers who gave up a comfortable life to serve the underprivileged are one of the most salient examples. Nevertheless, it was argued that such voluntary work is not the norm of modern medicine, and therefore cannot be used as a suitable representation of the current era.

In summary, the theoretical aspect of the proposition was rooted in an analysis of the history of phi-

losophy, which involved a decline of virtue-based ethics and dominance of liberalism and ego-centric objectivist capitalism. Since altruism is a product of virtue-based ethics, logically, it has declined in all aspects of society, including medical practice. The argument was supported by evidence in form of defensive medicine, cosmetic medicine and pharmaceutical patents.

## Opposition



Team opposition: (from left) D. Mak (MBBS V), Professor Doctor Mary Yip (Associate Dean), A. Lai (MBBS V), C. Lam (MBBS V), A. Choi (MBBS II), V. Tsui (MBBS II), E. Sin (MBBS II)

The crux of side opposition's case lies on the concept of intention. From the outset side opposition argued that the essence of altruism is intention. Sacrifice in personal benefits is neither a necessary nor a sufficient condition of altruism. In other words, if a person wishes to help others to the extent that he is willing to sacrifice personal interests to do so, he is already altruistic. The fact that he did not make such sacrifice in reality, perhaps because reality does not require him to do so, is irrelevant. Therefore, side opposition was ready to concede that modern medical professionals have indeed suffered less than their predecessors, but they argued that this cannot be seen as evidence of a decline in altruism. Rather, they attributed it to the advancement of modern biomedical technology.

For example, responding to proposition's example of the selfless monk who devoted his life to treating isolated lepers, side opposition argued that his sacrifice, though commendable, was no longer necessary in modern society. Following the discovery of the pathogen, Hansen's bacilli, diagnostic, remedial and preventive measures were devised to minimize the risks to the caregivers. For example, in contact isolation wards, patients are ordered not to touch the doctors and nurses, who wear protective

clothing that give protection. Similarly, opposition responded to proposition's example of Li Shi-Zhen by explaining that the use of laboratory animals has replaced, to a large extent, the use of living human beings in drug trials. Therefore, had Li Shi-Zhen understood the principles of animal experimentation, it would have been unnecessary for him to try a hundred herbs.

After establishing that genuine sacrifice is no longer necessary in modern times, side opposition attempted to prove that altruism still exists in contemporary medical professionals. Their evidence was the medical students and doctors in Hong Kong. The argument was that entry to the Medical Faculty is most difficult in the region, indicating that those who are capable of such achievement should have the highest level of intellect. Their brilliancy gives them the freedom to choose between many other respectable disciplines of study that lead to highly lucrative and comfortable careers – engineering, investment banking, law, etc – but they still choose medicine. Opposition then proceeded to claim that practicing medicine is the most demanding and exhausting job in Hong Kong. As a house officer, one needs to work for 70-90 hours a week, somewhat comparable to an exploited factory worker. As a junior medical officer, one is constantly subjected to unreasonable demands from superiors and immense responsibilities completely disproportionate to the income they receive. However, opposition reasoned, in view of the fact that the brightest still take this difficult path and enter medicine, one must therefore conclude that these individuals have not cared exclusively for economic gain, but rather higher ideals of medicine. They are willing to sacrifice the comfort they would have enjoyed in pursuing other careers in order to help the poor patients. This is clear evidence of their altruism.

This argument, however, was refuted by the proposition who pointed to the recent exodus of public doctors to the private sector. Proposition challenged that patients who received healthcare from the private sector are likely to be better off economically, and thus not among the most needy. If the doctors were truly willing to sacrifice their economic gain to help the underprivileged, they would have voluntarily stayed in the Hospital Authority. However, in reality, a significant proportion of them did not and even protested and left the public sector for more comfortable conditions of practice. Therefore, these doctors must not be as altruistic as their historical counterparts.

In rebuttal, it was asserted by side opposition that the measurement of a 'decline' or an 'increase' should only be done in absolute terms, i.e. it is only meaningful to compare the number, rather than the proportion, of altruistic medical professionals in different historical eras. Therefore, since the medical profession has expanded considerably throughout history, in numerically absolute terms, the number of voluntary MSF workers alone should already be larger than that of all altruistic medical professionals in the Middle Ages, so it is correct to conclude that altruism has increased, rather than decreased, in medical practice.

#### **Result:**

The result of the debate was determined by votes



*Team opposition makes its case while proposition offers a point-of-information*

cast by the audience. It appeared that side proposition won the debate by a narrow margin. The motion was carried.



*Both teams with teachers and guests*

# In The Jaws Of A Predator

## How The Media Portrays The Hospital Authority

In this day and age, the media plays a somewhat hypocritical role. They portray the Hospital Authority as a bunch of bumbling fools, highlighting every blunder, placing healthcare workers under the unforgiving glare of the spotlight and subjecting them to heavy public scrutiny. This treatment is completely unfair. As the media piles on the pressure, hospital executives are forced to issue guidelines for their staff so that when mistakes occur, they can point to the said guidelines and prove that the mistake was not theirs.

The end result? Staff, petrified that they will be held accountable for such mistakes, adhere to those guidelines like wet stamps to an envelope. There is no more room for good ol' common sense. Well, there is nothing wrong with that, you may be thinking. Who needs common sense anyway when there are clear instructions sent from above? However, replacing common sense with strict guidelines was a huge sacrifice, as we saw in the incident involving the Caritas Medical Centre in December 2008, when a man who collapsed some distance away from the hospital could not gain immediate access to help from the emergency department and eventually died. This happened partly because of inadequacies in the guidelines informing staff how to deal with patients who are not actually inside the hospital, and partly because the staff acted not on impulse, but exactly as those guidelines advised them to.

Naturally, the media and the public criticized this behaviour. Use your common sense, they cried. The question is: How can hospital staff be expected to follow their instincts instead of the guidelines if they know that the media is always hiding in the shadows, waiting to pounce on them like a predator seizing its prey? In a society like ours, in which the public is quick to blame and disapprove and the media takes pleasure in sensationalizing trivial events to quench their morbid thirst for blunders, leaving no potential story untouched, the slightest lapse in judgement could be deadly for healthcare workers and others who are in the public eye.

Essentially, the media, as well as the general public, are blaming the Hospital Authority for failure to use common sense in the presence of guidelines,

a problem which they were probably responsible for exacerbating in the first place through their demands for near perfection and their relentless efforts to deliver a constant barrage of criticism.

Alas, therein lies the hypocrisy.

It is important for everyone to realize that guidelines are not there to dictate exactly what you should or should not do in every possible scenario. It is impossible for guidelines to be comprehensive. They are merely there to suggest a course of action in situations which are most likely to occur. Thus, when guidelines are insufficient, which is often the case, we should all be encouraged to use our common sense and do what we intrinsically feel is best. You may be amazed at how intuitive and sensible people can be when they deal with the most unexpected circumstances.

Returning to the news media and their role in society, bear in mind that the function of journalism is to provide accurate information on current affairs. So instead of appealing to the public's emotions, journalists should be attempting to provide reliable, objective and unprejudiced coverage of important incidents involving the healthcare profession, to keep the community informed of successes and failures alike. Journalists should aim to present the facts without exaggerating, twisting the truth, adding their own perspective or insinuating their own agenda, and in so doing, allow the reader to interpret the event in his own way and make his own judgement. Otherwise, if the news is purposely designed to mislead the community and create highly unrealistic expectations of the medical profession, then journalism may have become nothing short of propaganda. Ultimately, this is harmful not only to the healthcare profession but also to the society as a whole.

To be fair, the Hospital Authority has indeed made some serious errors in the past, but can the harsh reaction of the media be justified? Is this not worsening the problem? Is the media's portrayal of the Authority biased and inaccurate?

To illustrate the tactics used by the mass media, I have included some telling quotations below, all taken from local newspapers covering the Caritas incident. After analyzing their clever use of language, which is loaded with prejudice and, as you will soon realize, is designed to manipulate the reader's emotions and interpretation of the incident, you should be able to judge whether the media's portrayal of the Hospital Authority is fair or not...

*Regarding the Caritas incident, in which a man died after a delay in reaching the A&E department despite collapsing only a short distance away, due to confusion amongst staff about how to deal with such patients:*

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### **"blunder-plagued Hospital Authority"**

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The word "blunder-plagued" suggests that mistakes are occurring in unimaginably large numbers and are so intolerable that they can be compared to disease or vermin.

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### **"new blunders put the [HA] under fire again"**

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In a single article, the word "blunder" is used more than five times, insinuating that those responsible were stupid and careless. The reporter also tries to emphasize that this is not the first mistake using "new" and "again". The phrase "under fire" suggests to the reader that he, too, should be outraged at the HA.

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### **"declining a man's plea to treat his father"**

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The noun "plea" is emotionally stirring. It attempts to arouse sympathy for the victim and portray the hospital staff as insensitive and inhumane.

*Regarding the public response to the way the chief executive of Caritas initially failed to apologize for the incident and instead defended his staff by asserting that they had followed proper procedures and done nothing wrong:*

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### **"public outcry and public apologies from [HA] chiefs"**

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The emotive noun "outcry" suggests that there is widespread fury, but who can justify this? Repetition of "public" strengthens the feeling of collectiveness and inclusion in the reader, as if rallying the public against the HA. It also draws attention to "apologies", smugly pointing out that the HA has admitted to its errors.

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### **"a patients' rights group condemning the centre as 'cold-blooded' "**

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"Condemning" is a particularly powerful verb. It is accusatory, suggesting the centre has committed a terrible act. This negative image is reinforced by the adjective "cold-blooded" which subtly compares it to an animal with no conscience or regard for the lives of others.

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### **"sparked a storm of criticism"**

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Alliteration of the 's' draws attention to the phrase. The metaphor "storm of criticism" creates an image of a wave of disapproval so intense that it is as uncontrollable as Mother Nature herself.



# 好書推介

## 刀下再留人——志在行醫的日子2

書名：刀下再留人——志在行醫的日子2

著者：鐘尚志

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JUPAS/EAS的同學都知道，考香港A-LEVEL的同學都要交三篇三千字的閱讀報告作為中國語文及文化科的評核之一。這些讀書報告都不知煎熬了一眾學生多少個晚上，故人們都戲稱這為「攞你命三千」。筆者當年嘔心瀝血，歷盡滄桑，終於完成了三篇的家課，滿以為那是人生最後的一篇讀書報告，曾豪言永世不再撰寫此等無聊習作，豈知今天竟然以書為題，作為啟思的一篇文章，其背後的原由，皆因這書實在值得推介。

《刀下再留人》這書是《刀下留人》的「添食版」，由三十篇小故事組成，講述作者前中文大學醫學院院長鐘尚志自己在巴布亞新畿內亞當外科教授時的所見所聞，亦包括了作者當年求學習醫時的一些經歷。作為醫科生的你我，在書中看到一些似曾相識的病症、藥名等醫學詞彙，實在倍感親切。而當作者描述在手術台上的每一個環節，每遇到一個難關的時候，更是令我有如親臨其境，為病人及醫生抹一把冷汗。

正如作者自己在序言之中所說，聽外科醫生「講古」，真的是沒完沒了。當我看著這本書的時候，感覺就像在聽前輩說故事一樣，既有娛樂，亦有得著。書中的故事有趣怪的「鬼古」，解釋醫院時常鬧鬼的原因；有探討生命無常，當醫生無能為力，無法根治病人疾病的無奈；亦有眼見病人快要從癌症之中康復，最終卻因同鄉的嘲諷而放棄治療的可惜。這些故事，有令人鼓舞振奮的；亦有令人不勝唏噓的。

雖然書中的物理解釋有理解上的錯誤，最後的幾個故事更是悶得厲害，但此書行文流暢非常，節奏鮮明爽快，再加上作者的個人歷練，故事真的是發人深省。如果仔細一想，差不多每個故事的背後，都能帶出一些社會話題或是人生哲理。

記得小學的時候寫的閱讀報告，最後的感想總有一句「我會把這書介紹給朋友，因為……」或類似的字樣。想不到筆者進了大學，還是要寫這樣的一句話。把這書推介給眾讀者們，除了因為好看之外，也因為大家都是未來的醫護人員，對書中的故事一定十分有同感，同時亦能汲取前輩的經驗，對日後了解病人十分有幫助。而書中由數十個小故事交織而成，可以趁乘車時看上一兩篇，亦只不過花十分鐘左右的時間，卻能一解無聊，實在享受。



# Cambodia – Under The Shadow Of The Past

Every year numerous tourists from all over the world rush to Siem Reap, Cambodia for its beautiful stone-made temples built more than a thousand years ago. Among them, two remain the most spectacular. Angkor Wat, which is smaller, is famous for its beautiful view of the sunrise. When the sun rises and travels across the five main towers of Angkor Wat, the Cambodians are blessed as the new day begins. Meanwhile, Angkor Thom is famous for the smiling Buddhist on every face of its towers, where the mercy of the Gods shone upon the people. The age of Angkor was the the most splendid and glorious era of the kingdom.



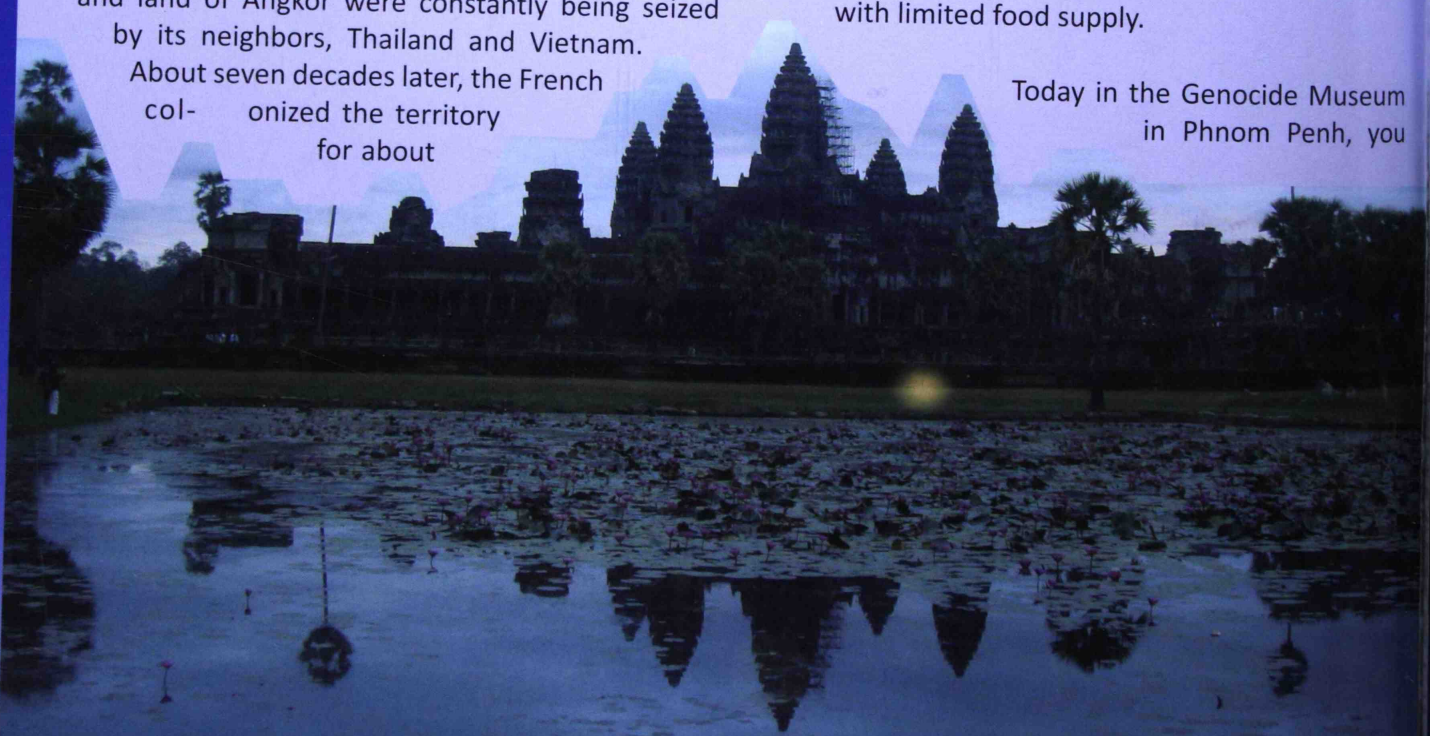
The Sun continued to shine over the land of Cambodia for about 600 years, but thunderstorms soon erupted across the sky. Shiva and Apsaras (nymphs) faded along with the rain, taking away the good fortune Khmers (ethnic Cambodians) had been granted. Starting from 1593, for about 300 years, the gold and land of Angkor were constantly being seized by its neighbors, Thailand and Vietnam.

About seven decades later, the French colonized the territory for about

one century. After gaining independence again the country enjoyed some twenty years of calm, but this was not to last. During the Cambodian Civil War (1967-75), countless bombs were thrown onto the land by the US air force. Even today, landmines are still scattered perilously around the country in most provinces, hidden bombs waiting to be detonated by unsuspecting passers-by.

The bombs helped Khmer Rouge, a communist party, to gain control over the country. They claimed to be "peace-oriented" during the war and were therefore supported by most Cambodians from the countryside. Led by Pol Pot, the government soon started its extreme communist policies. First, the citizens were all forced to evacuate to rural areas. Later, all those who opposed communism, and those considered "enemies" of the peasants, including physicians, were captured, tortured, and eventually killed. Families were torn apart and strictly monitored. People were forced to migrate to places far from home and work as slaves with limited food supply.

Today in the Genocide Museum in Phnom Penh, you



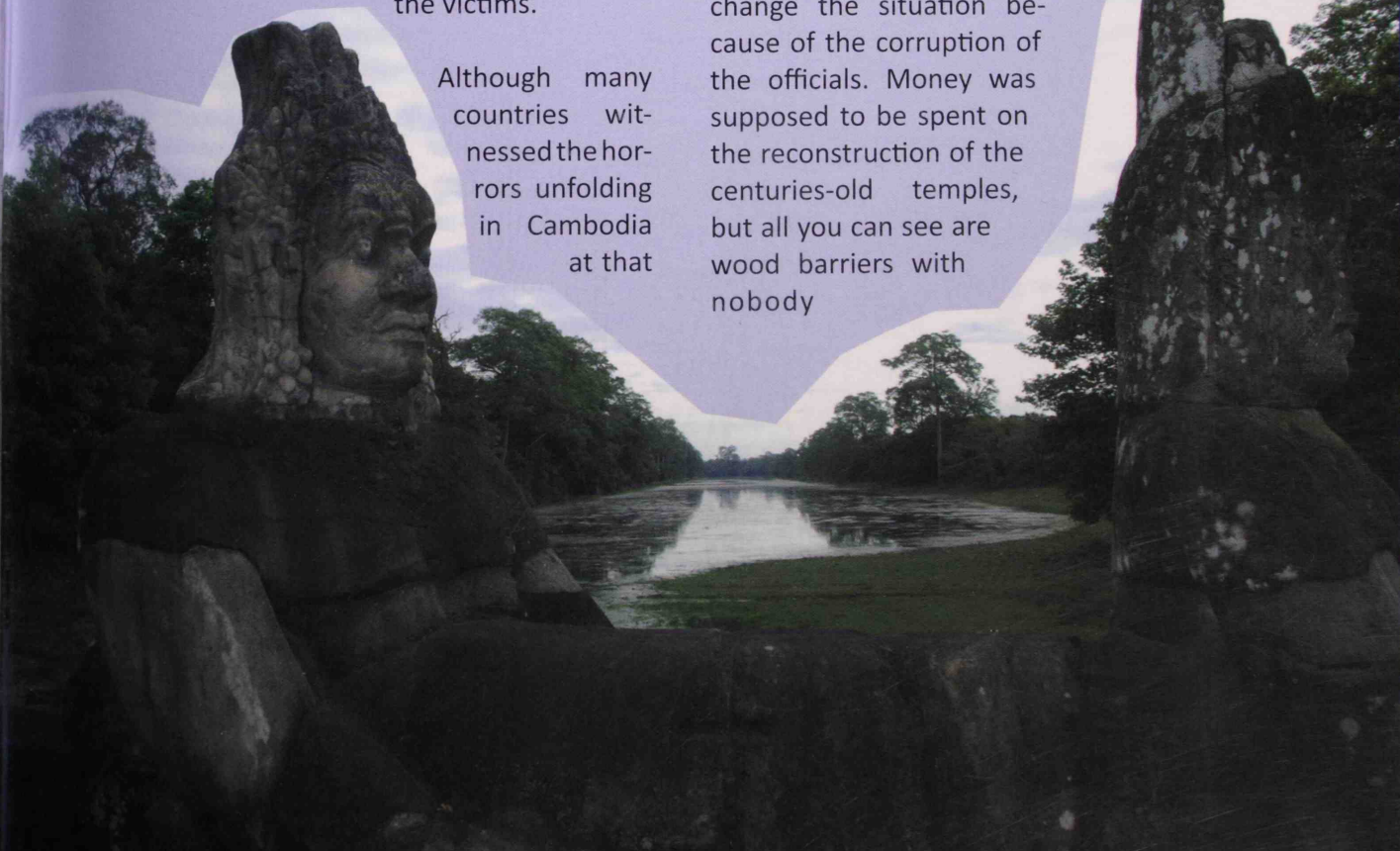
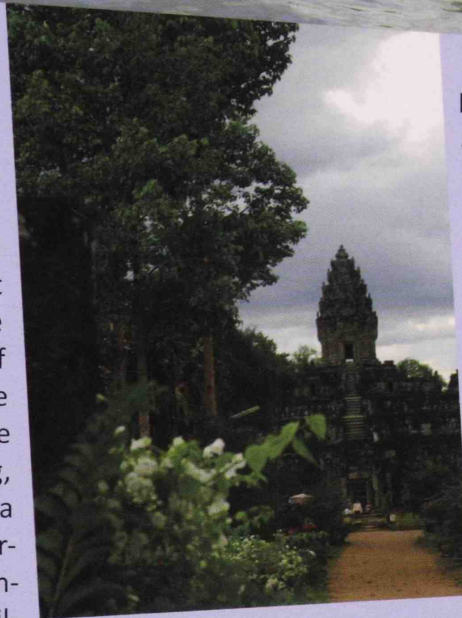
can still see the evidence and sorrows left by the victims. There were cells in which innocent people were tied and beaten; poles where people were hanged. However, those torturers never made the suffering short for their victims; they tormented them almost endlessly and let them die only when they got bored or just felt that they had to kill someone that day. On the glass shelves there are hundreds of skulls, most of them anonymous, each with a different cause of death, while on the walls of the museum, thousands of photos were displayed. Every prisoner had their photo taken. They always looked at the camera and some even smiled - not because they wanted to, but because of the needles stabbed in the back of their heads. In the other room there was a different batch of photos; the people in them were usually young, some even children in uniform, with a standard hairstyle. They were the torturers - the Khmer Rouge had brainwashed and trained teenagers and children to form the "youth league", a band of children who were forced to act cruelly to all of the victims.

Although many countries witnessed the horrors unfolding in Cambodia at that

government was aware of the problem, it was unable to change the situation because of the corruption of the officials. Money was supposed to be spent on the reconstruction of the centuries-old temples, but all you can see are wood barriers with nobody

time, almost none of them ever did anything to stop it. Cries of the Khmer people were left unattended. The terror lasted for several long years, until the Vietnamese invasion. It is estimated that at least two million people died during the Khmer Rouge's reign.

In 1993, 14 years after the downfall of Khmer Rouge, the Cambodian monarchy was finally restored and started its long journey towards self-healing. Years of wars and instability had brought the country poverty, poor infrastructure, crimes and numerous landmine victims. Tourists brought money in, but also induced destruction. Millions of hands touched the carvings in the ancient temples, making the gods fade; bars and child prostitution increased to meet the foreigners' demand. Although the



working on the site. Roads were never paved as planned; crime continued to soar because the police officers were paid higher by the criminals than the government. People cannot receive adequate health care because there are, on average, only 0.16 medical doctors and 0.61 nurses per 1000 of the population. Universities and schools were never properly funded; villages without clean water and basic infrastructure were neglected.

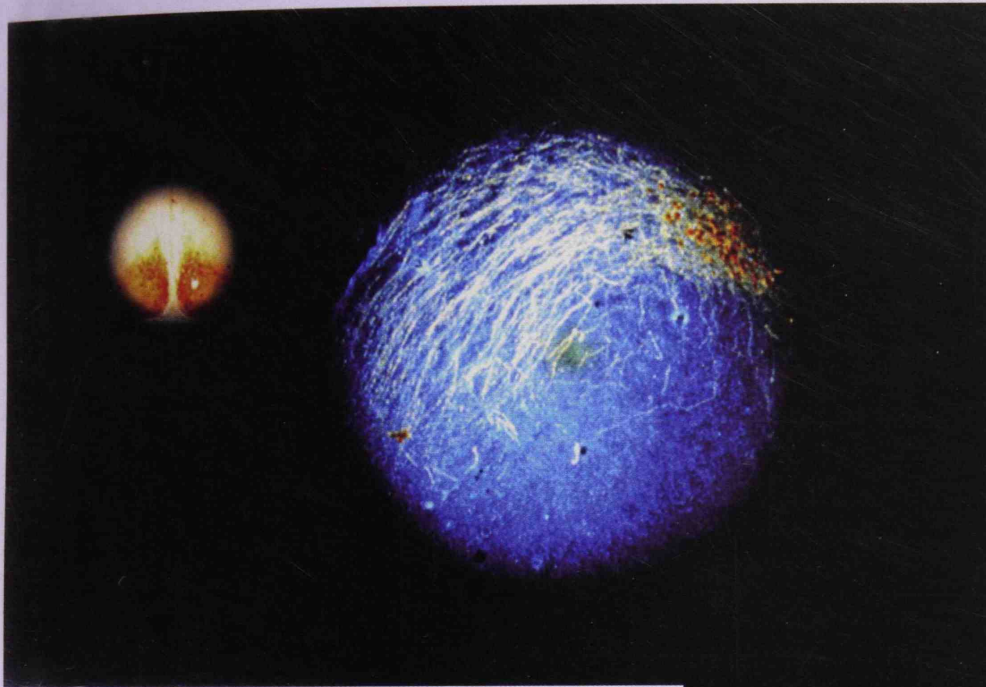
Today, tour guides who earn about 10 US dollars a day are considered the middle upper class. Children wander the streets, trying to sell some roughly made souvenirs in order to make a living for their families. You can see almost no hope in their eyes. They are not taught or skilled; they can only wait besides the entrance of the historical sites and mutter, "One dollar," begging on empty stomachs. Sometimes they get candies and pencils from the tourists, but what use can they make of them? One afternoon, while on a visit to Cambodia, my family took a boat to visit the



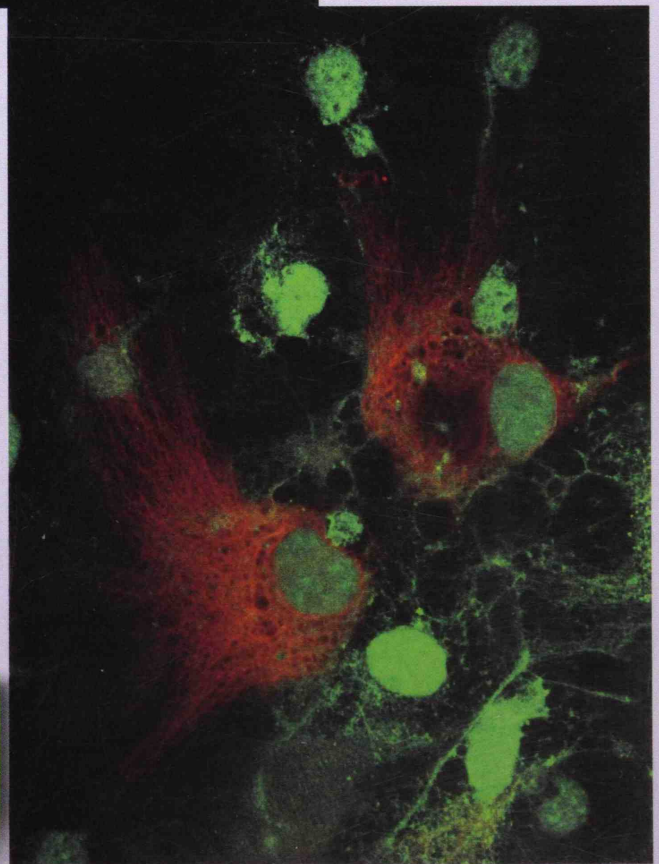
floating village on the lake Tonle Sap. The livelihoods of the inhabitants of the village depend entirely on the water: they earn a living from the fish caught or the tourists who come; the lake is their sole water source and where they dispose of their waste. Simply from the stench in the air, you can tell how unhygienic the living conditions are. Having seen all this, it is really hard to believe whether the lives of Cambodians could really improve one day.

In 2005, natural gas and oil were found underneath the Cambodian sea. Extraction is planned to start around 2011. By then, it is hoped that Cambodia could rise again and return to its former state of glory after 1000 years of despair.

# Microscopic Photos Can Be Deceiving...



Can you guess what this photograph shows? Doesn't this look like the Earth and the Moon? In fact, this is a microscopic picture taken from a rat brain, which has been treated with a special stain for neurons!



Doesn't this look like an abstract painting? In fact, this is a microscopic picture of stem cells which have also been treated with a special stain!