Writing a book about ‘the basics’ of your academic discipline is both challenging and refreshing. The challenge is to describe the complexities of the subject in an accessible style, yet without distorting or simplifying the issues. It’s a challenge which every ‘ivory tower’ academic should surely attempt at least once in a lifetime. At the same time, it is a refreshing experience and (most of the time) I have enjoyed it. To be able to write without constant referencing and without forever worrying about the kind of nit-picking criticisms which academic reviewers are likely to offer gives a feeling of freedom to write more spontaneously and informally. This is meant to be a book that speaks directly to non-experts in the field, especially to those who are facing the kind of ethical problems I describe. If the book makes sense to that readership, I will be very happy indeed!

I have had help from several colleagues in this task, some assisting with literature searches and others giving detailed commentary on some of the chapters, especially ones where I felt out of my depth. I was especially helped by those who guided me in summarising several religious and cultural approaches outside my own tradition for the chapter on perspectives on bioethics. Thanks for this are due to Alireza Bagheri, Nancy Berlinger, Subrata Chattopadhyay, Soraj Hongladarom, Paul Ulhas Macneill and Voo Teck Chuan
(but of course any remaining errors are entirely mine). Donald Hill gave great help with very focused comments on the style and the philosophical aspects of the book, and Gerard Porter on the ethics of international research. Lisbeth Nielsen and Leo de Castro helped me find sources on research ethics and research integrity, and Jacqueline Chin to chart my way through the feminist literature.

Special thanks are due to Syahirah A. Karim, a Research Associate at my Centre. She has tirelessly (and always cheerfully) worked both on research for the book and on getting the chapters into a publishable form. Without her consistent and skilled help, this book would never have been completed.

Finally, writing this work has been a family affair – with one son a philosopher, another a paramedic and my wife a lawyer, I have never been short of support and understanding, including help with cases and relevant literature. It has all helped to make this a truly rewarding experience.

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ABBREVIATIONS

ART  assisted reproductive technology
CH   capability to be healthy
ELSI  ethical, legal and social implications
ESCs  embryonic stem cells
IAB   International Association of Bioethics
iPSCs induced pluripotent stem cells
IVF   *in vitro* fertilization
NIH   National Institutes of Health
PVS   persistent vegetative state
VE    virtue ethics
WHO   World Health Organization
WMA   World Medical Association
WHAT IS BIOETHICS?

Is health care just a business like any other, or should health care professionals have a higher standard of ethics? Should we invent a pill that enables people to live for hundreds of years? Have parents the right to use science to design the kind of children they want? Does everyone have an equal right to health care, whatever it costs? Is abortion the same as killing babies? Should we create creatures that are partly animal and partly human? Is it OK to sell our body parts, such as one of our kidneys, like we buy and sell our material possessions, our cars or our mobile phones? Should the state force people to adopt healthy life styles? Should mercy killing be made legal? Does it matter if our current use of natural resources is likely to totally destroy the environment in a few years from now?

These are the kinds of questions raised and discussed by bioethics. As we shall see, the subject began with concerns about the morality of doctors and other health care workers, but as science and technology have opened up a myriad of possibilities for changing human life, it has broadened out to include a wide range of ethical issues related to human health and welfare. Although, literally, the word ‘bioethics’ just means the ‘ethics of life’, I shall restrict its
meaning to those areas of human life in which medicine and the biomedical sciences can affect human well-being – for good or for ill.

HISTORY

In some respects bioethics has a very long history. Concerns about how doctors treat their patients go back to ancient times, with ethical codes like the Hippocratic Oath and the Charaka Samhita Oath of Initiation setting ethical norms; and in the nineteenth and early twentieth centuries the rapid expansion of the biological sciences began to raise new questions about the possibilities for human progress and the potential conflicts between science and religion. But the birth and rapid development of modern bioethics came as a result of the atrocities of the Second World War.

HUMAN GUINEA PIGS

We can begin with the Nazi War Crime Tribunals held in Nuremberg from 1945 to 1949 in the aftermath of the Second World War. These trials revealed a grisly catalogue of crimes against humanity, many of them perpetrated by doctors and involving ruthless and lethal experimentation on the inmates of concentration camps. (Many years later it was to emerge that equally horrifying experiments were carried out on Chinese prisoners by Japanese doctors (Nie et al., 2008), but these were hushed up by the American government in a deal that allowed it access to the results (Harris, 1994).) Out of the horror of the Nuremberg trials came the first stages of the growth of bioethics. The Nuremberg Code of 1947 (Office of History 1947) laid down fundamental principles for the protection of the subjects of medical experiments, most notably stressing the necessity for fully informed and voluntary consent. Around the same time, the World Medical Association was founded and it produced the Geneva Code of Medical Ethics, an updated version of the ancient Hippocratic Oath. (Texts of these and other documents can be found in the Appendix.) The Code required that ‘The health of my patient must be my first consideration’.
Thus modern bioethics comes in part from medical ethics and specifically from the ethics of medical research. Awareness had grown that doctors cannot always be trusted to act ethically and that the traditional reliance on professional self-governance was simply not enough. The somewhat smug traditional approach to the nobility of the medical profession is well captured in these comments by a long-serving chairman of the British Medical Association Ethics Committee:

In the relations of the practitioner to his fellows, while certain established customs and even rules are written and must be written, the principal influence to be cultivated is that of good fellowship. Most men know what is meant by ‘cricket’ and the spirit of the game. Difficulties and differences will arise, but most of them can be successfully met by mutual goodwill and recognition of the other fellow’s point of view.

(British Medical Association, 1974)

The idea that somehow the rules of cricket sum up morality must surely have been shaken by the revelation of medical involvement in acts of gross inhumanity during the war. Yet, in the decade and a half following Nuremberg, a sense of complacency seems to have remained in the medical profession. The atrocities committed in the war were seen as the aberration of a few psychopathic individuals driven by an evil ideology, but the profession as whole could still be seen as noble and trustworthy.

This illusion could not last. It began to crumble when writers on both sides of the Atlantic revealed what was happening in the ever-burgeoning area of medical research and drug trials. The most notorious of these unethical research trials was the US federally funded Tuskegee Syphilis Study, which lasted from 1932 to 1972. In this study, 399 impoverished African American men in the tertiary stages of syphilis were enrolled for observation of the final phases of the disease when left untreated (Jones, 1993). At the time, syphilitic patients were known to suffer significantly higher rates of mortality and morbidity, typically relating to cardiovascular and central nervous system pathologies. However, subjects were not told of their diagnosis, nor were they given access to effective medication (penicillin) once it became available in the 1940s. The study was finally disbanded only after a media exposé. This shocking episode
in the history of American medicine was finally the subject of an apology by the President of the United States in 1997, 25 years after it ended. Yet even as this apology was being made, more evidence of similarly outrageous research was emerging. From 1946 to 1948, the US Public Health Service and the Pan American Sanitary Bureau worked with several Guatemalan government agencies to do medical research—paid for by the US government—that involved deliberately exposing people to sexually transmitted diseases. The researchers apparently were trying to see if penicillin, then relatively new, could prevent infections in the 1,300 people exposed to syphilis, gonorrhoea or chancroid. Those infected with syphilis included soldiers, prostitutes, prisoners and mental patients.

Back in the late 1960s these shocking examples were still not generally known about, but enough was revealed by the writings of H. K. Beecher in the USA (Research and the Individual, 1970) and M. H. Pappworth in the UK (Human Guinea Pigs, 1967) to make the international medical community realize that all was not well with medical research. Already in 1964 the World Medical Association (WMA) had published the first version of the Declaration of Helsinki, setting down rules for the ethical conduct of medical research. The debate about how to monitor and control medical research to make sure it stays within ethical bounds has continued ever since. Over the years the Declaration has gone through six revisions, with the latest version adopted in October 2008 at the WMA’s General Assembly (see Appendix).

MEDICAL MAGIC

However, dubious research practice was not the only reason for the burgeoning of bioethics in the decades following the Second World War. An even more potent influence came from the dramatic expansion of medicine’s capacity to save lives and either cure or prevent disease, through the production of a vast range of pharmaceuticals and vaccines, the refinement of life-saving medical technologies such as dialysis and heart-lung machines, and major improvements in surgical techniques. In those heady days it must have seemed to many people that the conquest of disease and disability was just around the corner. Yet, of course, every new
advance brought fresh ethical problems. With the advent of organ transplantation, it became necessary to find a new definition of death – ‘brain death’ – so that the organs to be transplanted would remain viable; and the ability to keep people alive on machines did not necessarily mean that the quality of a patient’s life was improved or even maintained. Moreover, the massive commercial power of the transnational pharmaceutical and medical technology industries could also pose a major threat to health, through the medicalization of all human experience from birth to death, as Ivan Illich argued in his controversial book, Medical Nemesis (1974).

NEW COLLABORATIONS

I shall be discussing some of these new ethical challenges later, but for the moment we can see how the idea that doctors alone could discuss and settle these new ethical challenges became quite unsustainable. These were issues of intimate concern to patients and of vital interest to society as a whole. The radical changes in medicine demanded a move to a more open, nuanced and multi-disciplinary medical ethic, and one that opened the decisions of the profession to public debate. As a result, new institutions and new academic journals were founded in both the UK and the USA. In 1967 The Hastings Center, an independent non-partisan institute for the study of ethics in the life sciences, was set up in New York State, and it commenced publication of the Hastings Center Report four years later. Around the same time, the Society for the Study of Medical Ethics emerged in Britain as a result of a medical student initiative to get medical ethics discussed in medical schools; and in 1975 the Society joined forces with the British Medical Journal to produce the Journal of Medical Ethics. From the start, these new institutions represented an active collaboration between doctors and other health professionals, philosophers, theologians, lawyers and social scientists. Medical ethics was breaking away from its origins in the closed professional circle of doctors and coming of age as an independent and critical scrutiny of the ethical issues emerging in medicine and in health care as a whole.

Since those early days of bioethics there has been a vast expansion of centres and institutes devoted to bioethics and of journals in the field, as well as an increasing presence of medical ethics in the
core curricula of medical schools. But, since it is not the purpose of this book to give a full history of the discipline, I will merely pick out three main developments that have had a profound effect on the increasing complexity of bioethics.

HEALTH AS A PUBLIC GOOD

The first of these is the influence of the World Health Organization (WHO). The WHO was founded in 1948 as a specialized agency of the United Nations. Early in its history it supported a wide definition of health as ‘complete physical, mental and social well-being, not merely negatively as the absence of disease or infirmity’. (World Health Organization, 1948) In line with this broad approach, the WHO has been very active in issues of global public health, dealing with such issues as breast feeding, tobacco use, HIV/AIDS and global pandemics. The WHO approach focuses on justice in health care resources, as well as a recognition of the social determinants of ill-health – poverty, unemployment, lack of education and absence of adequate food, clean water and sanitation. These themes have entered into bioethical discussion, albeit somewhat tardily, and the subset of bioethics which deals with issues of justice has grown ever more important. This represents a departure from an exclusive focus on the practitioner–patient relationship to a critical study of why people suffer ill-health and how the social and political factors creating it should be tackled. More recently still, environmental ethics has come into the field, provoked particularly by global warming and its detrimental effects on human health. These issues will be discussed in the last chapter of this book, entitled ‘Justice’.

THE GENOME REVOLUTION

A second major influence on contemporary bioethics has been the exponential development of human genetics following the mapping of the human genome. This has raised some key questions about the determinants of human behaviour, the potential for predicting disease and disability and the protection of human privacy. No other field of bioethics has had such a concentration of scholarship, partly because of a decision of the funders of the human genome
mapping project to devote 5 per cent of the funds to the ethical, legal and social implications (ELSI) of the scientific discoveries. The issues uncovered by all this investment of effort will be discussed later (in Chapter 5), but for the moment we can note that this has led to a broadening out of bioethics from a focus on health care and the clinical relationship to ‘biomedical ethics’, the study of the ethical implications of findings in the biosciences, particularly in genetics.

GLOBALIZATION

Finally, the founding of the International Association of Bioethics (IAB) in Amsterdam in 1994 marks a significant new feature of bioethics, its emergence from a European–American domination to an attempt to be truly global and multicultural. The origin of the Association is significant in itself. Its first President, Peter Singer, had been subject to a form of censorship of his views on such controversial topics as euthanasia, by mass disruptions of meetings in Europe at which he was the main speaker. The founders of the Association saw this as a symptom of a widespread attempt to stifle free debate in bioethics in a range of countries where religious beliefs or other ideologies claimed a normative position. The constitution of the IAB states the objectives of the Association to be:

1. To facilitate contacts and the exchange of information between those working in bioethics in different parts of the world;
2. To organize and promote periodic international conferences in bioethics;
3. To encourage the development of research and teaching in bioethics;
4. To uphold the value of free, open and reasoned discussion of issues in bioethics.

In addition, the IAB constitution is designed to prevent national or cultural imperialism by requiring that the 21-member Board of the Association be drawn from all regions of the world and that no one country can have more than three members on the Board. The opportunity is thus created for a genuine dialogue at an international level, encouraging a diversity of approaches to bioethics.
BIOETHICS COMES OF AGE

In summary, then, bioethics has ‘come of age’ over the past few decades. Beginning from a critical appraisal of traditional approaches to medical ethics in the practitioner–patient relationship, bioethics has broadened its horizons to include the life sciences more generally, the social and political dimensions of health care and the challenges of globalization and multiculturalism. Matching this expansion has been a flowering of different ways of tackling the questions raised and an awareness that, as science and technology continue to throw up new possibilities, the ethical questions will become ever more complex. Whatever else might be said, it is clear that bioethics is not going to get easy answers to all the questions it raises!

WHAT ABOUT THE LAW?

I have been stressing the complexity of bioethics and the difficulty of finding simple answers to the dilemmas we face, but an obvious question now arises – can’t these problems and dilemmas best be solved by improving existing laws and drawing up new ones, if required? Why bother with ethical debate, if legislation can provide the answers?

Clearly, there are examples of how reforming the law can help with some issues. For example, abuses in medical experimentation can be prevented to some degree by a detailed set of regulations (as is the case with the Federal Regulations in the USA). Another area might be laws governing new birth technologies, of which a well-known example is the UK Human Fertilization and Embryology Act (2008) (United Kingdom, 2008). Laws preventing the use of genetic information to discriminate against people in health insurance or employment have also been passed in some US states (Department of Labor et al.). And a few countries or states have enacted provisions to allow doctors to end or assist in ending the lives of people at their request (often called ‘death with dignity’ legislation) (Focarelli, 2009).

But already the problems with using the law to solve the problems of bioethics begin to be obvious. In the first place, there is widespread disagreement about some of the issues mentioned above.
Examples would be the use of human embryos in research, which is permitted in the UK and some other countries but banned by the law in others; and euthanasia, which is permitted by the law in some places, but is a criminal offence in others. Moreover, many countries lack any kind of legislation on some areas, which are controlled by law in other countries. The result is 'medical tourism'. For example, infertile couples may travel to a country which permits commercial surrogacy if they are prevented from arranging this in their own country.

So, in controversial areas of bioethics, the law provides no consistent international answers. There have, however, been some attempts to reach international agreements in bioethics. The main proponent of this has been UNESCO, another agency of the United Nations. In October 2005 its General Council adopted the *Universal Declaration on Bioethics and Human Rights*. The first aim of the Declaration is stated as follows:

... to provide a universal framework of principles and procedures to guide States in the formulation of their legislation, policies or other instruments in the field of bioethics.

(United Nations Educational Scientific and Cultural Organization 2005, Article 2(a))

As is clear from this phrasing, this Declaration is merely advisory. It cannot determine what actual laws or policies are adopted by member states. Moreover, the vagueness and generality of its statements have been criticized by a number of writers – yet only such broad phrasing was likely to have any chance of international agreement.

It seems, then, that looking for a solution in universally accepted laws is a bit of a wild goose chase. However, this does not mean that the law is of no use or relevance in bioethics. But, instead of imagining that it can provide universally applicable, clear-cut answers, we can look for its help in two respects. First, the law defines limits to the permissible actions of doctors and others involved in science or in health care. These limits may be quite broad, but they are important nonetheless. The requirement to gain fully informed consent is one good example of a legal limit of this kind. This clearly establishes that treatment of, or experimentation
on, people who are able to make their own decisions is a form of assault, if done without their consent (unless there are special circumstances – such as a medical emergency – which justify not getting consent). A second example is medical confidentiality, which provides the secure conditions under which people can share intimate details of their lives for the sake of effective treatment. Third, the absolute prohibition of fraud or deception in research prevents the abuse of the power which the special knowledge possessed by doctors or scientists gives them. These three central pillars of professional and scientific integrity are almost universally backed up by laws governing professional practice throughout the world.

A second way in which the law is relevant to bioethics is in the detailed judgments of courts, the elaboration of case law. There are many landmark cases, in which legal analysis has helped to clarify the ethical principles at stake and to offer judgments, which provide precedents for future similar cases. Notable examples are judgments about the adequacy of consent to medical treatment, discontinuation of tube feeding of patients in persistent vegetative state (PVS), switching off life support at the patient’s request, non-treatment of severely disabled newborns, and separation of conjoined twins when this will lead to the death of one of them. In all these cases, judges have explored in detail the underlying ethical principles and the relationship of these principles to fundamental legal doctrines. Thus medical law, while not to be confused with bioethics, is clearly a valuable ally in the quest to get to comprehensive and well-argued solutions to the problems created by advances in science and technology as they affect human health.

METHODS

If the law does not provide the whole answer, how, then, is bioethics to proceed? What methods can it use to tackle the questions it raises?

GETTING THE FACTS RIGHT

We have already seen that the subject is essentially multidisciplinary, so we can expect a variety of methods to be used. A basic
requirement is that we get our facts right, since we cannot base valid ethical judgments on inaccurate or inadequate information. That is why medical and scientific experts are essential to the discipline. For example, there has been a major international controversy recently over the use of human embryos to derive \textit{embryonic stem cells} (ESCs) for research and possible treatments. Some opponents of the use of ESCs have argued that there is now no need for such cells, since \textit{induced pluripotent stem cells} (iPSCs), which can be derived from adults without causing them harm, can be used in exactly the same way. But is this claim correct? Only a scientific expert in the field can answer this factual question. Another example would be claims that patients diagnosed with PVS can in fact recover consciousness and communication (Lotze et al., 2011, Estraneo et al., 2010), but others have argued that these cases of recovery are because the diagnosis was not correctly made in the first place. Again, only expert opinion can provide an answer to this disagreement. Thus bioethics requires the highest standard of medical and scientific information (and this needs to be constantly updated), otherwise its conclusions about the ethical issues are worthless. It is also essential to be clear about those areas in which there is still scientific uncertainty, with more than one conclusion a possibility at this stage. The arguments become dishonest when such uncertainty is denied and proponents present only those conclusions favourable to their moral viewpoint (something which has often occurred in the stem cell debate).

**CLINICAL WISDOM**

A second area of needed expertise is what can be loosely termed ‘clinical wisdom’. This is a difficult concept and could easily be misunderstood. We have already seen how bioethics has broken free from the ‘doctors know best’ mentality, which saw the views of patients or of the general public as too biased or ill-informed to be of relevance to the decisions doctors were making. But the pendulum can swing too far the other way. The clinical encounter is not a straightforward provider–consumer relationship, on a par with, say, the marketing of TV sets or second-hand cars. In those encounters ‘the customer is king’, and it is up to the purchaser to make choices that suit his or her preferences, including such factors...
as quality and price. In such business transactions the Latin saying *caveat emptor* (‘let the buyer beware’) applies. In other words it is up to the customer to look after his or her own interests and to spot dodgy deals.

But, despite attempts to model health care on this kind of market transaction, the reality of the clinical relationship is very different. In most medical encounters we are no ordinary ‘consumers’. Fear of illness, perhaps of imminent death, makes most of us vulnerable and uncertain. We look to health professionals for information and advice, but also for support and understanding – not something we would expect from a used-car salesman! For this reason, some writers have described the relationship as ‘covenantal’ rather than ‘contractual’ (May, 1975), by which is meant that the professional offers a commitment to the welfare of the patient, which cannot be simply specified as a list of deliverables. For, in addition to the exchange of goods and services for a fee, there is the forging of a therapeutic relationship, and this in itself can affect the recovery of the patient. (These aspects of the professional relationship are discussed more fully in Chapter 4.) We can now see why bioethics needs not only the expertise of biomedical scientists: it also requires the insights of clinicians who know the personal cost, to patients – but also to practitioners – of a daily encounter with our vulnerability as human beings.

**SOCIAL SCIENCE PERSPECTIVES**

However, clinical wisdom, though important, is not enough to gain an adequate perspective on bioethics. When we are in the midst of things, we can lack the critical judgement to see the numerous factors that affect the way problems are encountered and solutions are sought. Here a different expertise is needed, that of the social sciences. This group of disciplines can be applied to bioethics in various ways. The tools of political science can be used to study how health care systems and other scientific enterprises function, identifying the factors that can influence ethical decisions and policies. (In Chapter 5 we shall see examples of this in the ‘tissue economy’ that have affected the way the procurement of human organs and tissue has been skewed by economic factors.) Social scientists can also look critically at the way
professions operate in society – Eliot Freidson’s devastating critique of American medicine, *Profession of Medicine* (1988), provides a famous example. In this book he argued that the claim to be ethical and trustworthy was merely a device for securing wealth and social prestige, not in any sense a genuine ethical commitment. Social scientific research methods, such as surveys, interviews and focus groups, can also be used to establish the opinions, beliefs and practices of doctors, scientists, patients and the general public. This can often yield surprising results, for example, that cancer patients consistently rate their quality of life higher than do those caring for them (Papadopoulos et al., 2011, Mellon et al., 2006). Such insights can help health providers to formulate a more sensitive and helpful approach to communicating with these patients.

**PHILOSOPHICAL CRITIQUE**

But, while all of these methods provide valuable information and insights, we do not yet seem to be at the heart of bioethics. That is because finding out what *is* the case does not tell us what *ought to be* the case. To take an extreme example: if surveys revealed that a majority in our society believed that there should be a policy of sterilizing all persons with an IQ of less than 90, to reduce the ‘burden’ on society by preventing them from producing ‘deficient’ offspring, this fact would not establish that the policy would be ethically right. To put it simply: ‘is’ and ‘ought’ convey two quite different types of claim – one is purely descriptive (‘most people favour compulsory sterilization’), but the other is evaluative (‘forcibly sterilizing people is wrong’). History is littered with examples of commonly held views which we would now regard as morally wrong; for example, that women should not be allowed to vote or receive higher education, or that some races are morally inferior to others.

Thus the main method of bioethics has to be concerned with the *justification* of moral views, not just with a description of who thinks what, or of the social factors that influence people’s views. That is why the whole of the next chapter will be devoted to explaining and assessing a range of moral theories, all of which attempt to show how moral claims are justified. The discipline that formulates such theories is usually called ‘moral philosophy’, or sometimes
(confusingly), ‘ethics’. The latter name is confusing because it can be used in so many different ways, as can the words, ‘morals’ or ‘morality’. These terms can describe a range of things – personal moral views, professional codes of conduct, the beliefs and attitudes of social groups (‘young people today have no morals’) or of whole societies (‘our country has lost its ethical bearings’) and, finally, ‘ethics’ can be used to describe the critical study of morality. To avoid this confusion, we need to describe the method of assessing different ways of justifying moral views as ‘philosophical ethics’ or, more simply, as ‘moral philosophy’, since the discipline of philosophy is all about assessing the validity of claims, whether these be to truth, beauty or goodness.

APPLICATIONS

However, this important point about the critical function of bioethics should not blind us to the fact that it also has important practical applications. It is not merely an academic exercise, of interest only to scholars who enjoy debating theoretical issues. There are many ways in which bioethics has been, and can be, applied to practical issues. The first is the influence it has had on professional education. This has been true not only of medical education, where courses in critical medical ethics are becoming a standard part of the medical curriculum worldwide. It is also a key component in health professional education generally. It was an early feature of nursing education, and the nursing associations have been as active as the medical ones in formulating and revising ethical codes. The other professions related to medicine have followed suit, with courses in ethics for dentists, pharmacists, physiotherapists and paramedics taking a central place in preparation for practice. The important factor here is that these courses have become not just rote learning of an ethical code, but critical reflections on practice, using case studies to ground the discussion in clinical reality.

A second area of practical application has been the setting up of national bioethics advisory bodies in many countries, some sponsored by government agencies and others funded independently of government. (Examples of the former are the Presidential Commission for the Study of Bioethical Issues in the USA, and of
the latter, the Nuffield Council on Bioethics in the UK.) These bodies are usually multidisciplinary and multi-professional, and they can have a major influence on government policies and on legislation, especially in newly emerging areas, like stem cell research and therapy.

A third aspect of modern bioethics is its participation in biomedical research through the study of the ELSI aspects of scientific studies, and also through independent scholarly research of key issues in bioethics. There is now a wealth of scholarly literature in the field and a large number of academic journals, with major sponsorship of the research coming from the European Commission, the National Institutes of Health (NIH) in the USA and the Wellcome Trust in the UK, as well as funding from many countries across the globe.

Finally, the study of bioethical issues is rapidly becoming an important feature of high school education, not only in courses in the biological sciences, but also more widely in courses on values and citizenship. This promises well, not only for the burgeoning of scholarship in bioethics, but also for a better-informed public who can take a more knowledgeable and active part in future debates about the new policies and improved legislation which many of the emerging issues in the field will require. Eventually, bioethics must not be seen as an area restricted to academics and professionals. The ethical issues which bioethics explores affect us all.

HOW TO USE THIS BOOK

The plan of the following chapters is as follows: Chapters 2 and 3 examine in detail the theoretical background of the subject, first by describing a range of moral theories and then by looking at other perspectives on bioethics, including the approaches of five major world religions; the last three chapters turn to practical applications, with Chapter 4 dealing with clinical ethics, Chapter 5 with research ethics and research integrity, and Chapter 6 with justice in public health, health care delivery and global health.

You should feel free to dip into the text at different places according to your interests. You will find a detailed list of contents and an index to help you find the relevant parts to read. There is no need to read the theoretical chapters first, though they may
help you to gain a richer understanding of the ethical issues, either before or after you read about some of the practical issues. Finally, I have given suggestions for further reading and other resources at the end of each chapter, so that you can follow up on topics of special interest to you, and a short glossary is provided to help you understand some of the more technical terms used (but I have tried to avoid these as much as possible). You will find the first instance of any glossary entry highlighted in bold. I hope you enjoy reading this book as much as I have enjoyed writing it!

RESOURCES AND FURTHER READING

Both Cambridge and Oxford University presses have published readers in bioethics – *The Cambridge Textbook of Bioethics*, edited by Peter A. Singer and A. M. Viens (2008); and *Bioethics* (in the Oxford Readings in Philosophy series), edited by John Harris (2001). These contain between them a good range of scholarly articles covering most of the areas discussed in this book. If you are interested in the history of the subject you should consult the volume by Henk ten Have and Bert Gordijn (2001) for European developments, and the account by Albert Jonsen (2003) of the ‘birth of bioethics’ in the USA. But these books are limited to developments in the West. To get the global picture, consult *Bioethics around the Globe*, edited by Catherine Myser (2011). This contains some hard-hitting essays revealing the cultural biases in the subject area. For a different take on bioethics, relating it to environmental issues and to broader scientific concerns such as genetic modification of crops, see *Bioethics: An Introduction for the Biosciences*, by Ben Mepham (2008).

The best way to discover the latest discussions in the field is to consult journals and the Internet. For a list of journals and many other resources see either http://bioethics.georgetown.edu/publications/scopenotes/sn38.htm, a website run by Georgetown University, or the NIH website, http://bioethics.od.nih.gov/. For details on medical malpractice, see http://www.loc.gov/law/help/medical-malpractice-liability/index.php. There are many journals in the field, of variable quality, so you should start first with the *Journal of Medical Ethics*, or *Bioethics*, or the *Hastings Center Report*. For medical law, there is again a wide range of journals. You could start
by consulting *Medical Law Review* or the *Journal of Law, Medicine, and Ethics*. There are also many blogs, giving you the up-to-date news, recent journal articles and (quite often) scandals. Among the liveliest and (probably) most reliable ones are: [http://blog.practicalethics.ox.ac.uk/](http://blog.practicalethics.ox.ac.uk/) and [http://www.thehastingscenter.org/BioethicsForum/Default.aspx](http://www.thehastingscenter.org/BioethicsForum/Default.aspx), but you could also consult [http://www.medpedia.com/news_analysis/56-Bioethics-Discussion-Blog](http://www.medpedia.com/news_analysis/56-Bioethics-Discussion-Blog).

In later chapters I shall be suggesting other resources, related to the specific topics discussed there.